AFFINITIES BETWEEN VENḐA AND OTHER SOUTHERN BANTU LANGUAGES

by

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Abstract

The thesis consists, as is indicated in the title, of a study of certain languages of southern Africa, in order to discover their affinities in respect to Venḓa. The study begins with a consideration of the relevant parts of Comparative Bantu to these languages. From this a hypothetical 'family tree' is constructed against which conclusions from that material based on other considerations may be seen.

The study is divided broadly into three main sections; firstly, the consideration of material that is wholly consistent with Common Bantu, secondly that which is only partially consistent and finally that which does not correspond to Common Bantu at all. Initially, the criteria used to establish the direct cognates between the languages are dealt with. Subsequently, a survey is undertaken of other putative cognates which appear not to conform to the stipulations laid down for direct cognates. Finally, computations are carried out to determine the ratio of direct as opposed to indirect cognates in each language in order to throw more light on their affinities with Venḓa.

In every case the comparisons are made using Venḓa as the focal point in relation to the six other selected neighbouring languages.

It has been found that Venḓa, while having distinct affinities with Sotho in some respects and Shona in others, should continue to be classified in a separate group. Various hypotheses have been formulated on the basis of the affinities postulated between Venḓa and the other selected languages. These are in certain respects an extension in detail of some of the more general hypotheses put forward in Comparative Bantu. (260)

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Prefatory Note and Acknowledgements

This thesis, based as it is on a comparison of a very large amount of material from seven different languages, clearly cannot include all the data collated during the research process. The thesis does in fact consist mainly of an explanation of the procedures carried out, with suitably selected examples. In addition, I have excluded from the data under investigation material such as interjections and ideophones, which are only marginal to the morphology of the languages.

I began this work with the great advantage of having studied both Southern Sotho and Karanga at the University of Cape Town, and of having already been familiar with Xhosa since my early childhood. While studying for my B.A. Honours Degree, (which in the South African system is based on a further specialist year following the B.A. general) I first began to develop an interest in comparative Bantu studies, and this led to my coming to London to study for a Ph.D. in this general field. The background of my studies at Cape Town provided me with a firm basis which has enabled me to profit from the courses that I attended at the School of Oriental and African Studies (S.O.A.S.). I should like to acknowledge the considerable assistance and encouragement that I have received from the academic staff at S.O.A.S. and

in particular from Professor A.N.Tucker, Dr. Hazel Carter and Mr. David Rycroft. There are also many others whose help has been most valuable, especially Professor M.E.R. Mathivha and Messrs G.Kahari, A.B.Ngcobo and V.Ralushai, who assisted me in checking my data. Finally, I cannot overstate my indebtedness to my supervisor, Professor Malcolm Guthrie, Emeritus Professor of Bantu Languages in the University of London, for his constant guidance and tuition. From the beginning of my studies his work in the larger field of comparative Bantu studies has always inspired me and will continue to do so.

List of Abbreviations

Afrik.	Afrikaans
Bibl.	bibliography
Bo.	Botswana
C.	consonant
C̥.	unvoiced consonant
CB	Common Bantu
CpB.	Comparative Bantu
CS.	comparative series
DCs	direct cognates
Fig.	figure
IR	Index of Relationship
Mo.	Mozambique
NA.	nasal augment
no.	number
ps.	partial series
Rhod.	Rhodesia
S.A.	Republic of South Africa
SB	Southern Bantu
SM	cognates skewed in meaning
SS	cognates skewed in shape
SSM	cognates skewed in both meaning and shape
TCCs	total cognates in common (between two given languages)
TCs	total cognates in study

V	vowel
Vol.	volume
≠	extraneous
∅	zero
⇆	corresponds to
→	should become in a regular reflex

Chapter 1

Introduction

Chapter 1

Introduction

1.1 Description of Objectives

Venḓa (tʃhivenḓa) is a southern Bantu language spoken by approximately 500,000 people (the βavenḓa), largely in the area around Louis Trichardt and Sibasa in the northern Transvaal of the Republic of South Africa. It has scarcely any dialectal variation and has been grouped linguistically mainly in a category of its own.[1] However, since Venḓa is in such a central position geographically with regard to the other southern Bantu languages, it provided an opportunity to use a single language as a starting point for the investigation of its relationships to the languages around it. As a second stage, it then might prove possible to determine any special relevance that Venḓa has in the broader studies of comparative Bantu and their application to African prehistory.[2] Thus, if one started from Venḓa and compared it

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1. See Cope: Bibl. no.11
   Doke: Bibl. no.12c
   Guthrie: Bibl. no. 18a
2. This was instigated as a result of a comment made by Guthrie.

with the Shona languages to the north, the Sotho-Tswana languages to the south-west and the Nguni languages to the south-east, it appeared even at a cursory glance as though there might be some difference in the degree of affinity between certain parts of the lexical equipment of Venda and each of the three groups of languages around it.

1.1.1 Reason for Thesis

No study of this kind has been undertaken before, although a certain amount of work in the general field of the comparative study of southern Bantu languages has been produced over the years. However, the interests and objectives of these studies have not been entirely the same as those of the writer's and as a result, the methods have been different. The bibliography should suffice in noting the various works which have dealt with these southern Bantu languages.

The work was undertaken with a previous knowledge of the languages of southern Africa such as Xhosa, Sotho and Karanga (a Shona dialect). Despite a lack of first-hand knowledge of Venda, it has been possible to scrutinise the Venda lexicon because of the extensive dictionary compiled

by N.J. van Warmelo,[3] in which the material has been accurately transcribed. Initially, indications of affinities of one kind or another between Venda and Karanga to the north, Sotho to the south-west and Xhosa to the south-east, were sought. Because of the distinctness of each of these languages, they have been classified into different groups,[4] although they are all in the same zone - Zone S.[5]

1.1.2 Classification of Languages

Each language within each zone has been classified and given a code number by Guthrie, which for reasons of economy of space and ease of reference in this study will be used to refer to the languages, in preference to the names. The list of languages, their location and the approximate number of speakers of the languages in Zone S are given below. The languages underlined are those in the present study.

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3. See N.J. van Warmelo: Bibl. no. 39
4. Guthrie CpB 85.62 "languages are embodied in groups and zones to form a framework within which to handle the multiplicity of Bantu languages."
5. Full key of list of Bantu languages in Vo.3 CpB and see map at end of Introduction for zones.

Zone S.

S.10 Shona Group. 4 - 4½ million speakers in Rhodesia.

S.11 Korekore (in Mozambique (Mo.) and Rhodesia (Rhod.))

S.12 Zezuru (in Rhod.)

S.13 Manyika Cluster (Mo. and Rhod.)

S.13a Manyika

S.13b Teβe

S.14 Karanga (Rhod.)

S.15 Ndau (Sofala) (Mo., Rhod.)

S.16 Kalaŋa (Rhod., Botswana (Bo.))

S.20 Venḓa Group. nearly 500,000 speakers in S.A.

S.21 Venḓa (South Africa, Rhod.)

S.30 Sotho-Tswana Group.

S.31 Tswana [tʃhwana] nearly 3 million speakers (648,000 Bo.) (2 million S.A.)

S.31 Tlhapiŋ (S.A., Bo.)

S.31a Roloŋ (Bo., S.A.)

S.31b Kgatla (Bo.)

S.31c Dwatu (Bo., Rhod.)

S.31d Kxhalaxadi (Bo.)

S.32 Northern Sotho (S.A.)

S.32a Pedi

S.32b Lobedu

S.33 Southern Sotho (Lesotho, S.A.) nearly 3 million speakers (1 1/2 million Les.) (1 1/4 million S.A.)

S.40 Nguni Group

S.41 Xhosa (S.A.) approx. 4 million speakers

S.42 Zulu (S.A.) approx. 4 million speakers

S.43 Swati and Ngoni (Malawi, Swaziland)

S.44 Ndebele (Rhod.)

S.50 Tswa-Ronga Group.

S.51 Tswa (Mo., Rhod.)

S.52 Gwamba (Mo., S.A.)

S.53 Tsonga (Mo., S.A.)

S.54 Ronga (Mo., S.A.)

S.60 Chopi Group.

S.61 Chopi (Lenge)

S.62 Tonga (Shengwe)

1.1.3 Choice of Languages

In order to give some breadth to the study, it was decided to select two languages from each of the three

groups, S.10, S.30 and S.40. As a result, Zulu S.42 (Zululand Zulu) has been added to Xhosa S.41 and Tswana S.31 (Tlhapiŋ) to Sotho S.33. In the case of the S.10 group, Zezuru S.12 and Manyika S.13a (Guta) have been chosen for purely practical reasons, in that they have more comprehensive dictionaries and better documented material. The material being handled in this study has been phonetically attested by the writer and has been obtained during the writer's four years of study at the School of Oriental and African Studies.

There are of course other languages and dialects that might have been included, but the work had to be kept within bounds and a total of seven languages seemed to be sufficient for the purpose of this study.

According to van Warmelo,[6] "The Bavenda live in contact with their neighbours, the Sotho-tribes in the south-west and the Tonga in the south-east and some traces of the influence of these two languages are easily discernible in Venda. With the Karanga tribes to the north contact is slight, but a Karanga element in Venda is unmistakeable." However, Tonga (Tsonga S.53) would have posed difficult problems due to insufficient documentation, whereas the

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6. N.J. van Warmelo: Bibl. no. 39b.

more distant Nguni languages did also seem to display evidence of closer affinities to Venḓa than to Tonga S.53.

It was envisaged that it might be possible to establish the affinities between Venḓa and these other groups in two respects,

a) by examining material which is related to 'Common Bantu', (CB) (a body of inter-related words forming a common language[7]) and

b) by examining material which seems to bear no relationship to Common Bantu at all.

The approach adopted is an empirical one, i.e. it is governed by the character of the data, and in some cases the techniques have been developed specifically to handle this data.

1.2 Procedures

In the first instance this involved taking Index A from CpB.[8] and building up a basic reference of CB 'starred forms',[9] i.e. symbolic representations of recurrent sets of

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7. See CpB. 22.51-52

8. Made available to the writer by Guthrie in the form of a copy of the typescript.

9. See CpB. 23.11

patterns which form a 'comparative series'. (C.S.).
A C.S. in turn, is a list of items, each of which has the same assignable meaning which acts as the connector of the C.S. and each of which has a shape that has patterns that recur with absolute regularity in other C.S.[10] Each relevant starred form has been noted with its corresponding gloss, together with the 'reflexes', in any of the seven languages chosen. 'Reflexes' are items corresponding in shape and meaning with the CB starred forms.[11]

1.2.1 Choice of Source Material

This study is based largely on the lexicon. Problems of morphology and syntax have been investigated in CpB. where various features are shown to be broadly similar in the Zone S languages. As has been stated it also is expedient to keep the work within certain limits. As the study has been based on the documentation of the lexicons, it has been essential to choose the appropriate dictionaries with care, and a) to locate the works in time. The sources have been carefully scrutinised to eliminate the possibility that

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10. See CpB. 22.01
11. See CpB. 23.31

relatively recently incorporated material does not appear under the guise of constituents of the lexicon. With the sources too far back in time, the problem of accuracy and competency might arise; similarly with sources too near the present, there might be the risk of a high percentage of foreign material. Therefore the period chosen has been fixed between the years 1920 and 1940, the halcyon period, when funds were becoming more readily available for research and publishing, and African departments were being developed in the various universities,

b) to check the accuracy of transcription and glossing, where first-hand data is available.

The following dictionaries have been chosen as primary source material:-

Venḓa	S.21	N.J. van Warmelo	Tshivenda-English Dictionary, 1937
Zezuru	S.12	Rev. E. Biehler	A Shona Dictionary 1927
Manyika	S.13	Father Buck	A Dictionary with notes on 1911 Grammar of the Mashona language commonly called Chiswina.

Tswana	S.31	J. Tom Brown Secuana-English Dictonary 1923
Sotho	S.33	Rev. A. Mabille Sesuto-English Dictonary 1924
Xhosa	S.41	J. McLaren A Concise English-Kafir Dictionary, 1928
Zulu	S.42	A.T. Bryant Zulu-English Dictonary 1917

Because of the different systems of transcription, it was highly desirable for the sake of uniformity to retranscribe the material. This retranscription has been based on considerations described in a subsequent paragraph. (1.2.6).

1.2.2 English Glosses

With the guidance of four comprehensive dictionaries of languages in the southern part of the Bantu field, a list of English glosses was drawn up in order to construct a comparative word list in the chosen languages. No account has been taken of the usage of words, since this would have expanded the study beyond practicability, without materially changing the value of the data.[12]

In the field of Bantu studies both descriptive and comparative, it has frequently proved necessary to treat nominal stems and verbal radicals separately, a practice

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12. See definition of Connecting Meaning CpB 31.21

that has been followed here.

As a first step then, under each of these headings, an alphabetical list of glosses was made, followed by seven columns containing the corresponding equivalent in each of the seven languages. The necessary verification of tone-marking was not undertaken until all the irrelevant material had been eliminated (see processes in 1.2.3 and 1.2.4).

1.2.3 Semantic Clusters

Before attempting to do any further screening however, it proved necessary to rearrange the glosses into semantic clusters[13] in order to avoid the possibility of overlooking 'cognates' between the languages, i.e. items appearing to correspond in meaning and shape. There was also the problem that certain items with a specialised meaning might appear with different glosses. Further, it was desirable to have some means of collating homophones with slight variations in meaning and therefore under a different gloss. For example, separate cognates comprising a different C.S. might have been envisaged for the examples below and the fact that they could be cognates belonging to the same C.S. might have been

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13. Guthrie's Classified Semantic Index to Part II. Vol.2 CpB. provided a starting point for setting up the semantic clusters.

overlooked, had it not been for the arrangement into semantic clusters. e.g.

a)	'ascend'	S.21	-ʁwel-
		S.13	-kwir-
		S.12	-kwir-
	'mount'	S.41	-khwel-
		S.42	-khwel-
b)	'sting'	S.21	-ɬhaβ-
	'stab'	S.33	-ɬab-
		S.31	-tlhab-
		S.41	-ɬaɓ-
		S.42	-ɬaɓ-

In rearranging these glosses into semantic clusters, the examples (a) and (b) emerged, which are typical of the cognates which arose and which covered a greater number of languages. And, thus,

c)	'throat'	S.21	m̄idzo	(3/4)	'animal's throat'
		S.33	m̄etso	(3/4)	
		S.31	mometʃo	(3/4)	
	'gullet'	S.31	mometʃo	(3/4)	
		S.41	um̄izo	(3/4)	
		S.42	um̄inzo	(3/4)	
	'oesophogas'	S.21	m̄idzo	(3/4)	
		S.41	um̄izo	(3/4)	

d) 'vein'	S.21	lutsiŋga	(11)
	S.13	mutsiŋga	(3/4)
	S.12	rutsiŋga	(11/10)
	S.31	losika	(11/10)
'artery'	S.13	mutsiŋga	(3/4)
	S.31	losika	(11/10)
'sinew'	S.33	lesika	(5/6)
	S.41	usiŋga	(11/10)
	S.42	usiŋga	(11/10)

The above nominal stems in (c) and (d) turned out to be cognates once they were grouped together in semantic clusters, in this case 'body parts'. There is an example of homophones in (d), where S.13 and S.31 have the meaning 'vein' and 'artery' for mutsiŋgaand losika, and are thus grouped together.

1.2.4 Associated Nominals and Radicals

In this kind of semantic grouping a number of glosses occur in more than one group, but the possibility of overlooking any cognates has been reduced.

In Bantu languages associated nominals and verbals are a basic phenomenon and a system of cross-referencing had to be introduced to deal with this, because, in detecting

cognates between the languages, there might be a candidate for a putative starred form in the verbal radicals which might correspond with a range of cognates in the nominal stems.

e.g.

'breathe'	S.21	-fem-
	S.13	-fem-
	S.12	-fem-
	S.33	-phefumoloh-
	S.31	-hem-
	S.41	-phefuml-
	S.42	-phefumul-
'breath'	S.21	mufemo (3)
	S.33	phefumoloho (9)
	S.31	sehemola (7)
	S.41	umphefumla (3)
	S.42	umphefumla (3)

The form at this stage in which the processed data appeared was a list of nominal stems and verbal radicals under the relevant glosses, semantically grouped, followed by seven columns, one for each language, which is a modification of the list mentioned in 1.2.2.

All 'direct reflexes' of CB stems and radicals, i.e. those corresponding perfectly in shape and meaning with CB, are then separated from the main body of material.[14] These will be dealt with first in the following chapter with reference to five of the seven languages in the study. Ideally, the actual data upon which this study has been based should have been quoted in an appendix, but since this would have run to some two hundred pages more it has not been feasible to include it.

1.2.5 Tabulation of Valid Reflexes of CB

In order to obtain the final screened data on which the investigation was to be carried out, the long list of glosses, approximately 3,000 nominal stems and 2,000 verbal radicals, were condensed to the point where they contain only material that reflects even a tenuous relationship between the languages. It was decided that there should be items from at least two of the main groups, i.e. S.10, S.20, S.30, S.40 in order to set up putative cognates between the languages. (Compare CpB. 22.44) The lists have been carefully examined and where there have been obviously no correspondences at all between the languages, the items have been discarded, but where there has been even the remotest

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14. Index B of CpB. was used as an aid for this purpose.

chance of some correlation however distant, the items have been kept within the lists. However, the necessity has then arisen as to a means of identifying sounds that occur in 'valid reflexes' i.e. reflexes having direct correspondences of sounds with CB. Thus, comprehensive lists of 'valid' sounds for each of the seven languages had to be drawn up, e.g. CB *pa would correspond with 'pa' in S.13 and therefore in S.13 any item containing the sound 'pa' must be regarded as a possible direct reflex. The same basic principles as applied in establishing CB cognates have been used to determine putative cognates between the languages in the present study. The additional cognates arrived at in this thesis therefore, need to be distinguished from those already to be found in CB. Thus, these lists of sounds facilitate the identifying of putative 'direct cognates', i.e. items in one language seeming to correspond perfectly with items in another language and also with CB. This has been essential, since in some cases, these languages have very peculiar and far-reaching 'sound shifts' which are "changes in shape of items from CB".[15] These lists are tabulated in detail at the end of Chapter 3.

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15. See CpB 23.24

1.2.6 Transcription of Material

As stated above (see 1.2.1 (b)), the material has been retranscribed in a uniform transcription in order to manage the wide range of the different orthographies used as primary source material. As far as possible the transcription is based on Guthrie's, described in CpB Vol.1, 12.02 - 12.04. A complete list of all sounds both of possible foreign origin and those occurring as reflexes of CB, in each of the seven languages is to be found in the Appendix and to which the reader is referred for further details.

1.3 Summary

In order to establish various types of affinities between the languages, it is imperative to distinguish between putative direct cognates that do not form part of the main corpus of CB but which seem to be confined to Zone S, and other putative cognates that are either 'skewed' with respect to CB or with respect to each other and for the purpose of this study these will be referred to as 'indirect cognates'.[16]

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16. Both the meanings 'skewed' and 'indirect cognates' have an origin in CpB, 34.21, & 34.61.

It is on the basis of the material dealing with the putative direct cognates that Chapter 3 is formulated. However, before setting out the main body of the study contained in Chapters 3 - 6, I consider in Chapter 2 the extent to which the material and results of comparative Bantu[17] can by themselves provide some indications of the affinities between the seven selected languages. Chapter 4 deals with indirect cognates that contain no 'extraneous'[18] sounds (i.e. sounds which under no circumstances could be considered to occur as any part of CB.) while Chapter 5 is basically concerned with the indirect cognates which do contain these extraneous sounds. In Chapter 6 some computations are made to compare these indirect cognates with the direct ones. Summarised observations are provided at the end of each chapter and finally collated and developed in the conclusions in Chapter 7. This final chapter will assess the 'closeness' of the relationship between Venda and the other six languages in the study.

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17. As set out in CpB.
18. See CpB 38.21

CpB. ZONAL TOPOGRAM

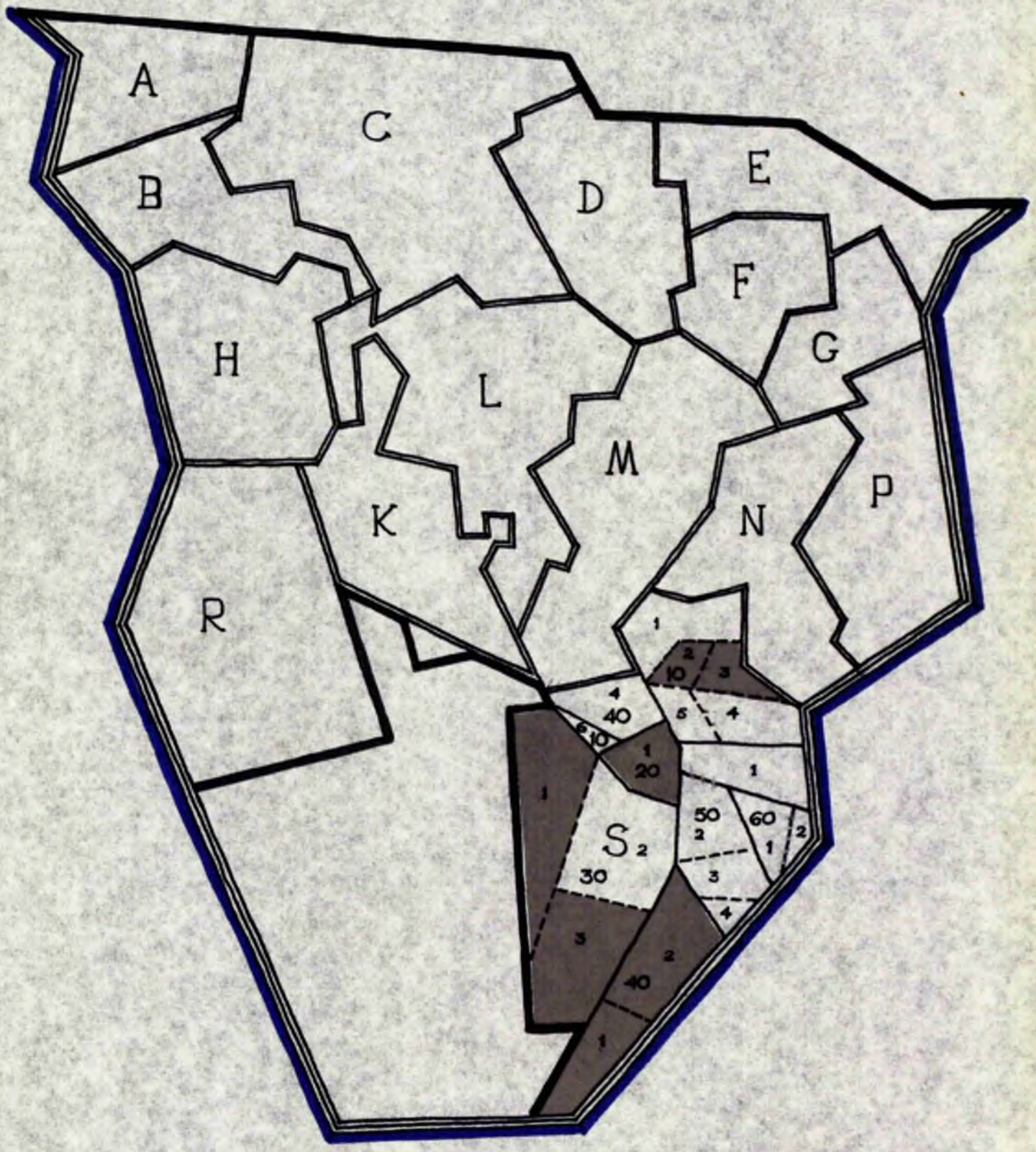

FIG. A

APPROXIMATE GEOGRAPHIC LOCATION OF LANGUAGES:

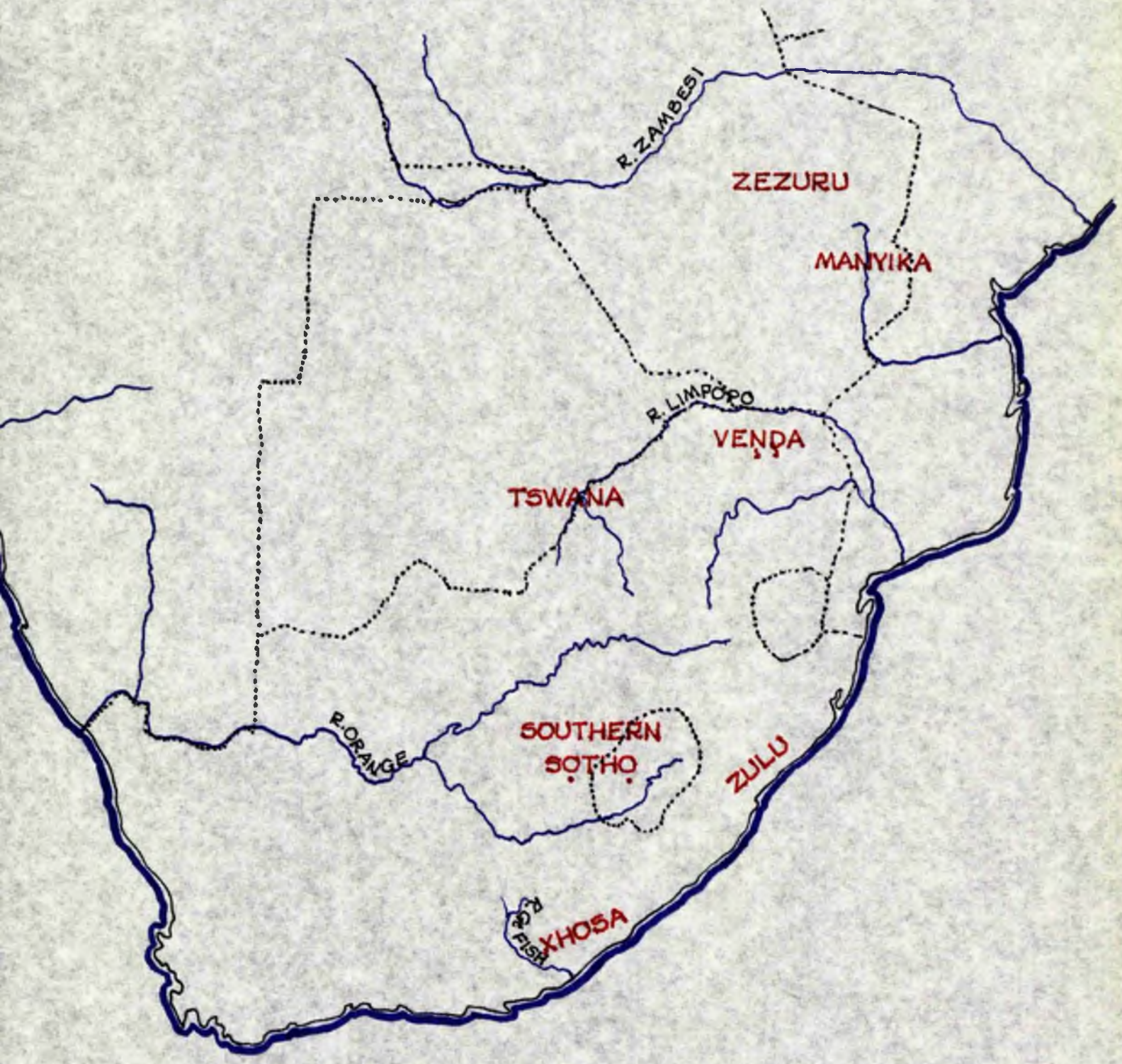

FIG. B

Chapter 2

"The Southern Bantu Languages and Common Bantu"

Chapter 2

"The Southern Bantu Languages and Common Bantu"

2.0 Introduction

Assessment of the affinities between the Bantu languages under discussion has involved a comparison of these languages. This comparison may be seen against a background of a wider comparative study of Bantu languages in general. It is therefore desirable to examine in detail this background in the light of the seven languages under discussion and to show to what extent in the context of Guthrie's CpB. they have affinities on the one hand with each other, and on the other with CB. Everything of possible value to this study is therefore extracted from CpB.

CpB. deals with only five of the seven languages under discussion i.e. S.13, S.21, S.33, S.41 and S.42. Hence, in this chapter, which is considering the material of CpB., these five languages only will be dealt with. In fact, as is shown in 2.1.1. it is possible to achieve results in this way, even though at this level S.12 and S.31 are not

taken into account. That this can be done is useful, since it may be hoped that this study will throw new light on certain aspects of comparative Bantu studies in general.

The basic methodology of CpB. has provided the lines along which a study such as this can be guided. Therefore, before describing the data and findings in the following chapters, some account is given of the methodology and techniques as described in CpB. and applied to the languages of the area.

The techniques of transcription exemplified in CpB. (which have provided the basis upon which initially to record the data at research level) later have been modified and adapted to suit the final draft.[1] This also naturally applies to the linguistic descriptions of CpB. which has afforded a basic descriptive terminology.

Thus, this chapter is concerned firstly with the formation of CB starred forms and the application of this method to the formation of starred forms confined to Zone S (see below 2.1) and the differentiation of the CB starred forms from the ones in Zone S. Among Guthrie's twenty-

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1. See Appendix

eight test languages five are used in the present study. The information arising from the investigation of these test languages is discussed and quantified in 2.1.1 and 2.2, where the assessment of the relationship between these languages is investigated on the basis of their index of relationship to each other. Thereafter, the method of establishing these indices of relationship is explained and calculations are made for the five languages pertinent to this study. The extent to which these calculations determine the similarity or divergence of the languages is assessed. The importance of the index figure which is obtained on the basis of the calculations i.e. whether it is high or low, is considered in the role of its illuminating the affinities between the languages. These figures are plotted on straight line maps to show visually their correlation, and an attempt is made to establish a hypothetical 'family tree' on the basis of the 'closeness' of relationship of the languages according to their indices of relationship.

Apart from the indices of relationship between the languages, their relationship to CB is noted in 2.3, based on calculations made by Guthrie, As has been stated earlier, everything of possible value to this study has been abstracted from CpB. The relative Bantu-ness of each of

the five languages provides information as to their possible genealogical relationship which will be elaborated further in the following chapters.

Items that do not correspond perfectly with CB are also considered in the light of CpB. as a precursor to such material as will be dealt with in greater detail in Chapters 4 and 5.

2.1 CB starred forms and Zone S.

From recurrent sets of patterns which emerge with absolute regularity in the CB reflexes in the various languages, symbolic representations of unit features such as consonants and vowels, in the shape of starred forms have been set up.[2] With these starred forms as a background, it has been possible to begin the study at an advanced level. Appendix 5/1 in CpB. has provided a scheme which has been elaborated and enlarged, and from which the consonant reflexes occurring in the chosen seven languages have been tabulated.[3] The vowels in the languages in this study have been compared with the CB vowels.[4]

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2. See CpB. 42.01
3. See Tables 1a - 1j below.
4. See CpB 42.71.

In the Introduction, 2.4, it has been mentioned that the CB reflexes have been differentiated from the finally processed material. This is necessary because they show the relationship between the Zone S languages and Bantu languages in other zones as opposed to showing relationships between the languages within the zone itself. In order to form a valid C.S.[5] one of Guthrie's minimum requirements is that it should be composed of items from at least three Bantu languages in at least three different zones. Therefore it is unlikely that the CB reflexes will reveal much with regard to the inter-relationships between the languages under discussion as these are all in Zone S. Nevertheless, they have proved to be of some value in determining the statistical relationship between some of the languages. This will be exemplified further at the end of this chapter.

The chosen languages have already been grouped by Guthrie into one zone and classified according to a system applicable to the whole of the Bantu field. The problem for the present study is therefore one of relationships within a specific restricted field.[6]

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5. See CpB. 22.01.
6. See 1.1.2 above for classification of languages.

2.1.1. Test Languages in Zone S

For purely practical reasons, such as geographical dispersion and variations in relationships, Guthrie selected of the three hundred plus languages he had investigated twenty-eight as 'test languages',[7]

"From Zone S five test languages have been chosen, since this zone included a very important section of the Bantu languages, which is at the same time both well documented and on the limit of the field. In the north, Manyika S.13a and Venda S.21 represent quite distinct types of language, while in the South the Sotho group is represented by Southern Sotho S.33, and the Nguni languages by their two most important members Xhosa, S.41 and Zulu S.42, which might in other circumstances have been treated as dialects of one language."

The common linguistic features existing between languages within a group are assumed to be great, greater even than the ties between languages in one group as opposed to another within a zone.[8] Therefore it is feasible to make use of the statistics arising from the test languages which exclude only Zezuru S.12 and Tswana S.31 of the languages under investigation. Of these two languages, S.12

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7. See CpB. 63.13-15.
8. See Guthrie's Bibl. no. 18c.

is in the same group as S.13, Manyika, and S.31 is in the same group as S.33, Sotho.[9] The 'closeness' of the relationship between languages in a group is illustrated further in the following chapter.

2.2 Indices of Relationship

Information which has been extracted from CpB. and which is of relevance to this study, is the statistical relationships between each of the five test languages. This has been referred to as assessing the 'Index of Relationship' (IR) between one language and another.[10] For this purpose the number of direct reflexes in each language in relation to the total number of starred forms in CB is imperative. Therefore, by counting the number of direct reflexes in each language, various calculations are made, based on these figures. The figures emerging to give the IRs between any two of the languages should depict, in order to be of value, the degree of 'closeness' of relationship between any two given languages. For instance, it will be seen in 2.2.1a and 2.2.1b that the IR between S.13/S.21 is 528, and that between S.21/S.33 is 882; the higher (/or lower) figure indicates a closer (/more distant) relationship.

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9. See Classification of languages in Introduction. (1.1.2 above)
10. See CpB. 63.61-84.

It has been found however, that certain additional figures are useful besides the total number of direct reflexes in each language in assessing the relationship between two given languages.[11] These are:-

a) The total number of C.S. that contain entries from both languages,

b) The total number of C.S. that contain an entry from one language but not from the other.

These figures have been otained by the writer from checked full lists[12] of the C.S. entries of each of the five test languages and the IRs between the languages have been calculated on the same basis as Guthrie has used for the other Bantu languages.

2.2.1 Method of Establishing IRs.

The method of establishing the IRs between two languages is set out below, (A and B standing for the respective languages). The following figures are required; in each case the number of entries refer to the number of reflexes

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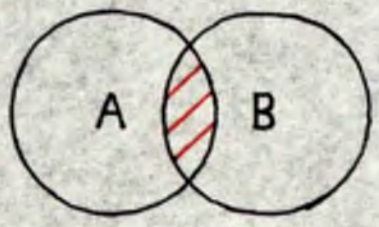
11. The type of figures necessary in order to determine the IRs have been investigated by Guthrie in some detail and calculations have been made, see Appendix 6/3 CpB. with an elaboration in article by Guthrie: Bibl. no.18d.
12. These lists are contained in Vol.II CpB. and have been made available to the writer by Guthrie.

of starred forms in comparative series.

1. the number of C.S. containing entries in both A and B
2. the number of C.S. containing entries in either A or B or both
3. the number of C.S. containing entries in A but not in B
4. the number of C.S. containing entries in A
5. the number of C.S. containing entries in B but not in A
6. the number of C.S. containing entries in B.

These numbers 1 - 6 may be expressed visually by means of Venn diagrams.[13]

(1)



(2)

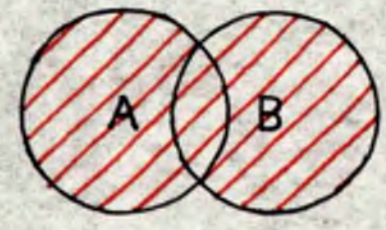


FIG. C

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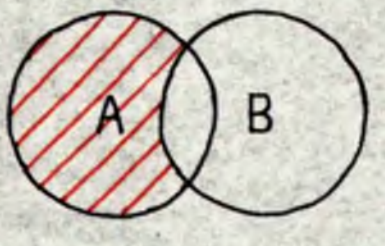
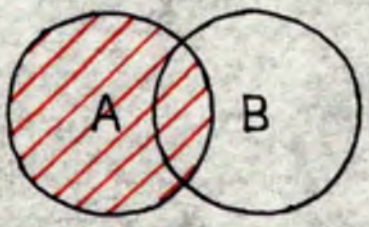
13. The section referred to in each number is coloured.

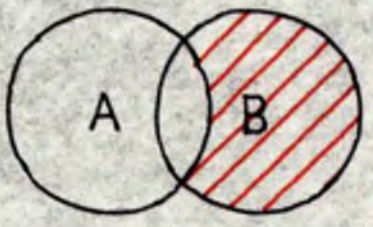
(3)



(4)



(5)



(6)

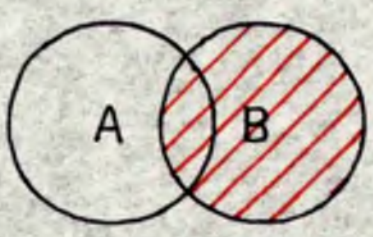


FIG. C (CONTD.)

The process is illustrated from the calculation of the IR between S.13 and S.21.

a) the number of C.S. containing entries in both A and B (1) is divided by (2) the number of C.S. containing entries in either A or B.

"Since the closer the relationship between two languages the larger will be the number of starred forms likely to have reflexes in each of them and the smaller will be the number with a reflex in either language alone,"[14] a basic proportion may be obtained by the division of (1) by (2).

Thus, (1) the total number of C.S. containing entries from both S.13 and S.21 is 207 and,

(2) the total number of C.S. containing entries in S.13 alone (103) plus the total number containing entries in S.21 alone (88), plus the number containing entries from both S.13 and S.12 (207) gives the total number of C.S. containing entries in either S.13 or S.21 or both as 498.

The basic proportion of C.S. entries for the two languages is then,

a) = 207 ÷ 498 = 0.415

In order to give the proportion of C.S. that have entries in each language individually,

b) the number of C.S. containing entries from A but not B (3) is divided by (4) the total number of C.S. containing entries in A.

Thus, the number of C.S. containing entries from S.13 but not S.21 is 203 and,

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14. Guthrie: Bibl. no.18d. p.117.

the total number of C.S. containing entries from S.13 is 410. The proportion of C.S. that have entries in S.13 only is then,

b) = 203 ÷ 410 = 0.495

and,

c) the number of C.S. containing entries from B but not A (5) is divided by (6) the total number of entries from B.

Thus, the total number of C.S. entries from S.21 but not S.13 is 88 and the total number of C.S. entries for S.21 is 295. The proportion of C.S. that have entries in S.21 only is then,

c) = 88 ÷ 295 = 0.298

To obtain the correction the average of these two figures (b) and (c) is taken. If the basic proportion obtained in (a) is divided by the sum of the two proportions in (b) and (c), the final ratio is obtained.

Thus,

$$\frac{0.415}{0.495 + 0.298} = \underline{0.528}$$

This final ratio is then multiplied by 1000 to give a whole number of the index of relationship between S.13 and S.21 which is <u>528</u>.

To give a clearer picture of the figures as an entity, these calculations and results are displayed in the following manner:-

2.2.1a S.13/S.21 IR.

S.13		S.21
(3) 203		(5) 88
	(1) 207	
(4) 410		(6) 295
(b) 0.495		(c) 0.298
	(2) 498	
	(a) 0.415	

$$\frac{(a)}{(b) + (c)} \qquad \frac{0.415}{0.495 + 0.298}$$

IR 528

Now with this IR figure as a given ratio and the working method to obtain this figure having been explained, the IRs which have been obtained in other comparisons of languages can be related to the one above. As has been stated, the higher the IR, the closer the relationship will be between the two languages, and conversely the lower the IR, the further apart their ties in relation to CB will be.

Similar calculations to the one above have been made for each pair of languages and the IRs been obtained. The calculations other than the IRs will only be quoted where comparisons or contrasts in some of the quantities need to be made.

In the example above 2.2.1a, it is interesting to note the big discrepancies in numbers (4) and (6), the number of C.S. containing entries in A and then B respectively. S.13 has the highest number of C.S. entries in CB of all the five Zone S test languages, more than a hundred than S.21. The number of reflexes of joint entries is also high, thereby making a low number of C.S. entries (88) peculiar to S.21 but not to S.13. The larger the number of starred forms which have reflexes in both of the languages, the closer the relationship will be between the two languages and the smaller the number with a reflex in one language only.

The total number of C.S. entries involved in the example above is considerable, whereas in the S.21/S.33 IR,

2.2.1b S.21/S.33 IR

S.33			S.21
(3) 94			(5) 87
	(1) 208		
(4) 302			(6) 295
	(2) 389		
IR			882

Observations are made on the calculations of and index arrived at in 2.2.1b above. Inferences are then drawn on

the basis of the observations and a comparison is made with 2.2.1a above.

There is a substantial difference between the figures arrived at in assessing the IRs of the above pairs of languages. It is therefore necessary to examine the computations stage by stage to establish the source of the discrepancy in the figures. The total number of C.S. entries involved is less than those in 2.2.1a above.

The total number of entries in both S.21 and S.33 (1) is nearly the same as (1) in the S.21/S.13 IR calculation above, however, the number of entries occurring in one language but not in the other, numbers (3) and (5) differs considerably from those in the S.21/S.13 calculation.

The three main ratios that figure in the calculation of the S.21/S.33 IR are,

(a) 0.534

(b) 0.311

(c) 0.295

The (c) ratio is almost the same as the S.21/S.33 (c) ratio, the number (5), (the total number in the one language but not in the other), being almost the same in both, but, (b) and (a) are substantially different, (a) being higher in the S.21/S.33 calculation, this is because (6) is much higher in S.21/S.13, and (b) is higher because of the

higher (3) in S.13. These are added reasons why there is such a divergence in the IRs of these two pairs of languages. Thus, the higher IR of 882 between S.21 and S.33 indicates a closer relationship between these two languages.

2.2.1c S.33/S.42 and S.33/S.41 IRs

The computations for the pairs S.33/S.42 and S.33/S.41 provide interesting contrasts.

S.33	S.42	S.33	S.41
(3) 84	(5) 170	(3) 113	(5) 143
	(1) 218		(1) 189
(4) 302	(6) 388	(4) 302	(6) 332
	(2) 472		(2) 445
	654 IR		528 IR

The two main ratios in the calculation are:-

S.33/S.42		S.33/S.41	
	(a) 0.462		(a) 0.425
	(b) 0.279		(b) 0.374
	(c) 0.438		(c) 0.432
(b) + (c)	= 0.717	(b) + (c)	= 0.806

Observations on these figures are then made:-
the number (3) in the S.33/S.41 calculation is higher than the S.33/S.42 (3), thereby reducing the resulting IR of S.33/S.41. Ratios (a) and (c) are almost the same, but ratio (b) is markedly different, this because of the high number (3) in the S.33/S.41 calculation.

It appears therefore that the large difference in the IRs is due to the correction i.e. (b) + (c) and the number (3) figure, reflecting the lower S.33/S.41 IR, and thus, S.33 and S.42 appear to be more closely related than S.33 and S.41.

2.2.2 IRs on Topograms

These IRs in 2.2.1a, 2.2.1b and 2.2.1c, (together with those obtained for the other pairs) are plotted on topograms[15] to show their correlation more clearly. One language, noted by its code number in each diagram, is placed in a box, indicating that this is the language to which each of the other languages is related. The numbers which are situated where the languages would normally be, see (i) Fig.D, relate to the language in the red box.

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15. i.e. Maps which reveal linguistic topology, see CpB. 24.14 and Guthrie: Bibl.no.18d.

IR's ON TOPOGRAMS

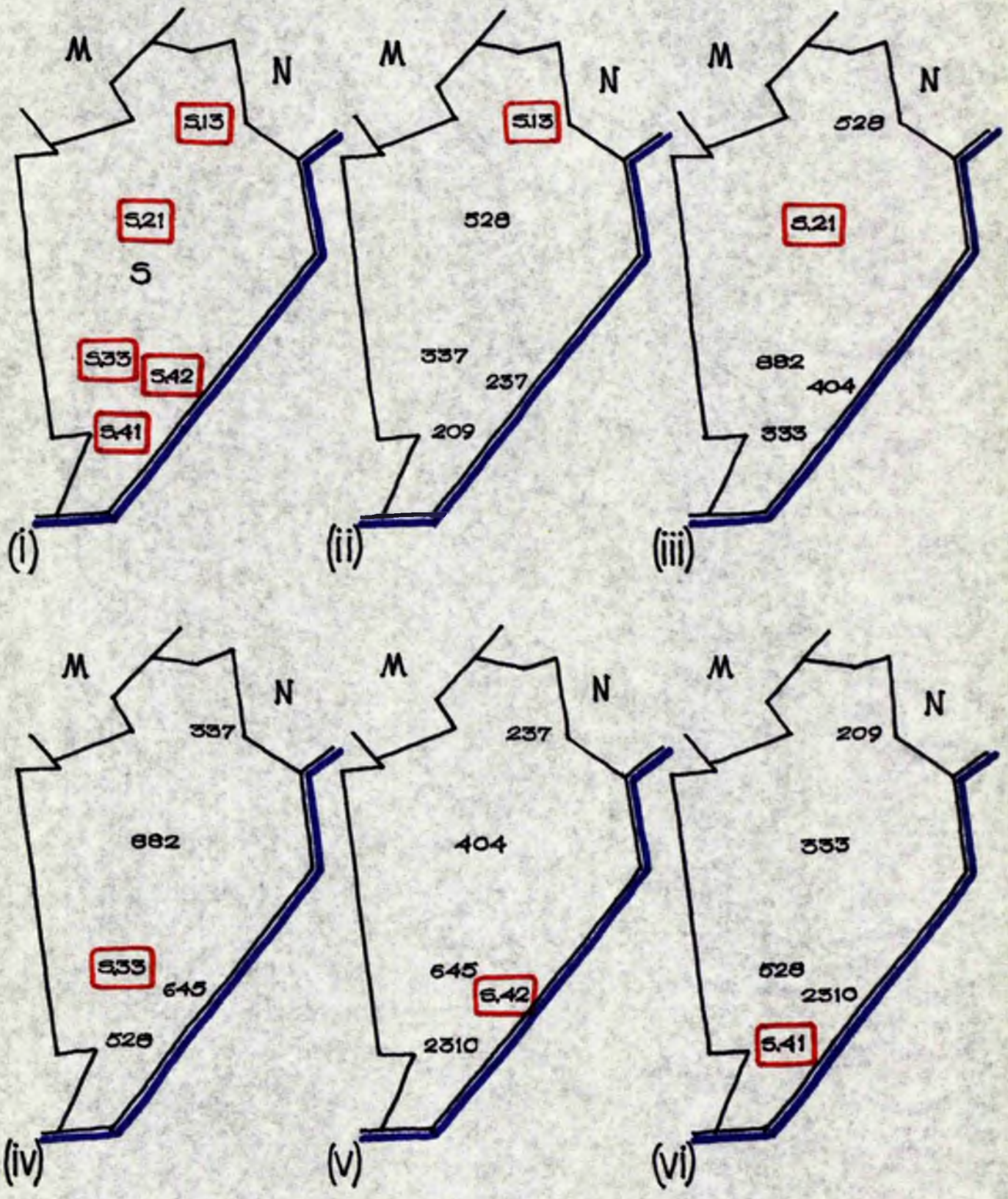


FIG. D

In Figure D the topograms of Zone S show the five test languages first, in (i), and their respective IRs in (ii) - (vi).

2.2.2a Facts from Topograms

Certain facts about these IRs can then be noted;

i) the S.41/S.42 IR is very high

ii) the IR for S.42 with the other languages is higher in every case than that for S.41

iii) the IR for S.21/S.33 is high, higher than the S.33/S.42 IR

iv) the IR for S.13/S.41 is the lowest

v) the IRs for S.13/S.21 and S.33/S.41 are the same

vi) the S.13 IR is among the lowest in every case.

2.2.2b Inferences from Topograms

General inferences from these facts can be drawn;

1) The particularly high S.41/S.42 IR seems to indicate the possibility of an intermediate common ancestor and thus the recentness of their separation. This figure is not unexpected as these languages are closely linked and have on a number of occasions been classified as dialects. Their proximity geographically and historically are added factors emphasising their linkages.

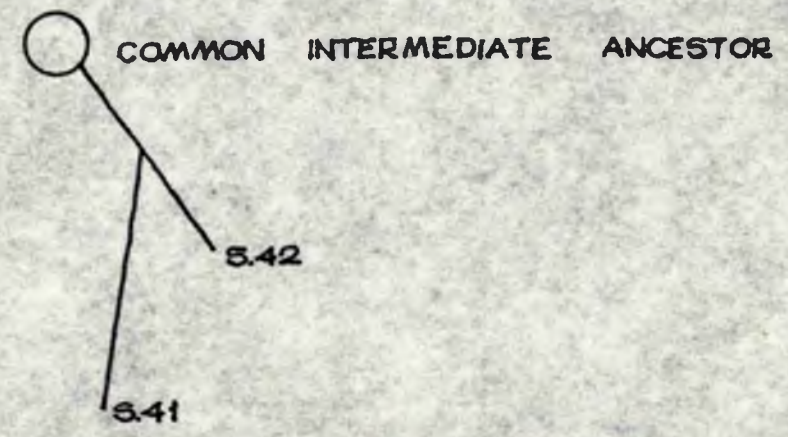
2) However, although these languages appear to be so closely related, it is interesting to note that their individual IRs

with other languages vary considerably.

3) It appears that S.42 is more closely related to the other languages with which it is compared than S.41, see fact (ii) above.

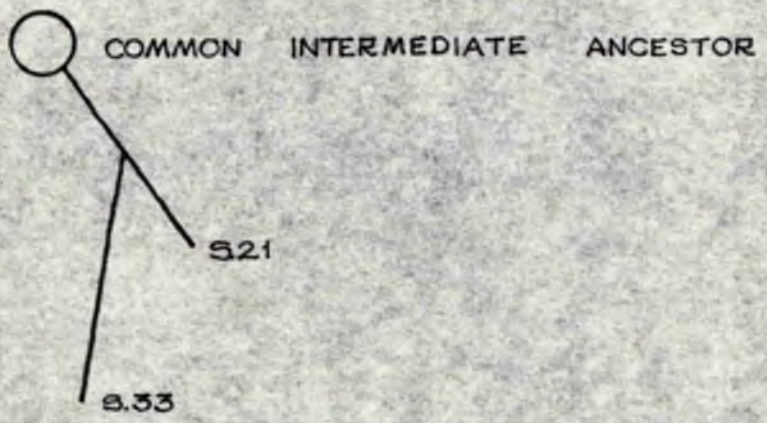
4) To these inferences can be added the notes on the computations 2.2.1c. S.42 always has a higher number (5) than S.41 when related to the same languages i.e. S.42 always has more reflexes not common to the language to which it is related than S.41. As these languages are considered to be closely related, the fact that differing results have emerged from the IRs, seems to suggest that it might prove useful in a future study to compare other pairs of languages similarly held to be 'closely related'. Plotted on a hypothetical 'family tree' in relation to their present geographical position it might be expected to be:

FIG. E



5) The unexpectedly high IR that emerges is that of S.21/S.33. This seems to indicate the possibility of an intermediate common ancestor for these two languages, see fact (iii), 2.2.2a. Note also 2.2.1b. With these points in mind these two languages may be plotted on a family tree (see Fig.F.):-

FIG. F



6) The fact that the IRs for S.13/S.21 and S.33/S.41 are the same, see fact (v), 2.2.2a, cannot be of much significance in terms of the present study as there is no common language in these calculations relating these IRs. It simply shows a similar relationship between the two pairs. At the moment all one can say is that this point may repay further study.

7) S.13 does not seem to share a common intermediate ancestor with any one of the four other test languages in Zone S, see (vi) above. Thus,

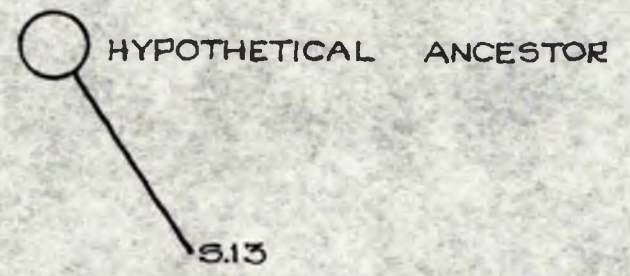


FIG. G

8) The phenomenon of the higher the IR the closer the link between the languages has been described as the 'proximity factor',[16] "the IR tends to decrease as the distance between the languages becomes greater, therefore any divergence from this factor would be of significance." With the particular languages under discussion, there appears to be no deviation from this factor, as the S.13/S.41 IR is the lowest and these two are the greatest distance from each other geographically among these five test languages.

2.2.3 Genealogical Relationships

From these general inferences based on the IRs, the possible genealogical 'family trees' can be drawn up, with the hypothetical common ancestor being *S. In forming a

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16. See Guthrie: Bibl.no.18d.

possible genealogical family tree, the intermediate common ancestor is traced through the higher IRs between the pairs of languages. The direction of the 'tree' is then based on the relative Bantu-ness of each language.[17] (See Fig.H.)

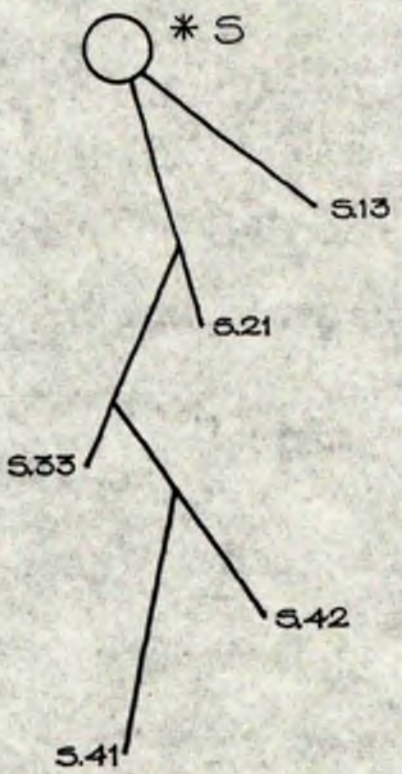

FIG. H
18.

2.2.4 IRs in Contoured Variation

Appendix 6/4 CpB. displays topograms showing the relationship between these languages and other test languages

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17. CpB. 63.21 and 2.3 below.
18. See over.

through-out the Bantu field, with the variation of their IRs noted in contours. There is little difference in the topograms showing the contours for S.41 and S.42, but it is interesting to note that in the case of S.33 and

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18.

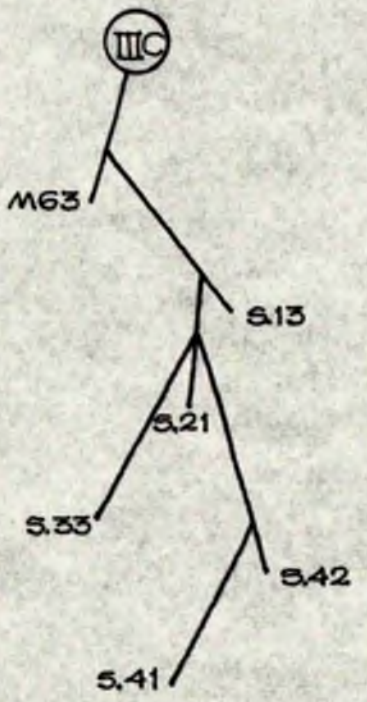

FIG. J

This hypothetical 'family tree' see Fig J. resembles 2.2.3 Fig H. in respect to the portrayal of a common intermediate ancestor between S.41 and S.42 as well as S.33 and S.21. However, the link between S.33 and S.42 is stronger in Fig H and therefore a common ancestor from these two has been noted and a different branching for S.42 given. Fig H. shows S.21 and S.13 as having a shared common ancestor, but not sharing a common intermediate ancestor, as in Fig. J, the CpB. diagram.

S.41 and S.42, S.13 is not included. With regard to S.21 only S.13 is included.

2.3. Coefficient of Bantu-ness.

Further calculations pertinent to this study, in regard to the relationship of the languages to Common Bantu, are the relative coefficient of Bantu-ness of these languages.[19] This is the relationship individually of each language to CB. Counting the number of entries in C.S., calculations such as the 'Coefficient of Commonness', are made, which is based on the complete range of C.S. and then with reference to the relative sections of CB, there are Coefficients of Generalness, Westernness and Easternness. These calculations once again have been plotted according to variations in coefficients in contours on topograms. Appendix 6/3 CpB., which affords visual aids to the calculations, (in particular T.1, showing the coefficient of Generalness) also indicates the high coefficient for S.13, then S.21 and finally the

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19. See CpB. 63.21.

lowest in Zone S grouped together, S.33, S.41 and S.42. T.3, showing the Coefficient of Commonness, shows S.13 once again having the highest coefficient and in this case the rest are grouped together on the same contour. This could indicate a special case of the '*proximity factor*' between the family ancestor and each language.

2.4 *Skewed Material*

Further statistical observations which provide added information to the background of the thesis are noted in *CpB*. with reference to 'skewed' material.[20] These deal with items that do not correspond perfectly to CB. In certain cases it is simply the meaning which deviates slightly from the CB connector of the C.S. and in this case the item is considered to have 'skewed meaning'.[21] On the other hand, items may correspond perfectly in meaning but there might be a feature in the item which rules it out as being a direct reflex of CB. This feature may merely indicate that the item could be a reflex of a starred form, other than the one to which it has been attributed and in this instance be 'eccentric'.[22]

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20. See *CpB*. 32.61.
21. See *CpB*. 32.41-53.
22. See *CpB*. 32.62-77.

The items that contain 'eccentric' features are skewed in shape and the items that contain an 'extraneous' feature are 'extraneous items'. On the other hand, an item may contain a feature which is wholly inadmissable as an entry of any CB starred form. This feature would then be considered 'extraneous'. Skewed items are thus not very remote from the C.S. in question.[23]

These items are shown as percentages of the total number of reflexes in a language. The value of this information is of significance as this study deals mainly with material outside the field of CB or on the fringe of it. The skewed material is in fact of extreme importance to the present study for the very reason that it in itself is more on the fringe of CB. For example, it appears that S.33 as compared with the other Bantu languages under discussion, has an exceedingly high percentage of skewed material, higher even than S.41 which is at the southern extremity of the Bantu field. Skewed items are discussed in detail in Chapter 4. It will be noted that S.33 and S.31 have a great deal of material with eccentric features, (see 4.1.5). Chapter 6 considers all the skewed material in relation to the direct reflexes. Calculations

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23. See CpB. 85.35-38.

are made for the purpose of comparison with the results of the calculations contained in this chapter.

2.5 Conclusions

1. With CpB. as a starting point, the study has progressed through the initial guidance of methodology, descriptive terminology and techniques. Information arising from the investigation of the test languages, (five of which are from Zone S and included in this study,) provides insight into the affinities between these languages.

2. This information arises from the calculations of Indices of Relationship between given pairs of languages, depicting 'closeness' of relationship between the languages. The higher the IR the closer the relationship between the languages. S.41 and S.42 have the highest IR, but they produce different results where they are compared with other languages. This is of value for future reference in setting up IRs for other closely related languages.

3. S.21 is more closely related to S.33 than S.13. This will be further substantiated in Chapter 5.

4. S.13 has the lowest IR in every case, suggesting a possible separate intermediate ancestor. This is also further endorsed by the topograms showing variations in the IRs in contours. (See CpB.)

5. From the inferences arising from the IRs, a hypothetical 'family tree' has been drawn up, see Fig.H.

Chapter 3

"Putative Direct Cognates"

Chapter 3

"Putative Direct Cognates"

3.0 Introduction

To establish putative direct cognates, (which are items in one language corresponding perfectly with items in another language), the direct reflexes of sound correspondences occurring in each language from CB first need to be determined. Therefore comprehensive lists are drawn up of 'valid' consonants, vowels and tonally distinctive patterns; by 'valid' is meant occurring in direct reflexes of CB material. With these lists as a reference, it is possible to formulate an index of putative comparative series (C.S.) comprising items from the seven languages under investigation and to differentiate the items in these C.S. from any which do not wholly agree with CB.

This chapter deals with that part of the material which corresponds regularly to CB and the following two chapters deal firstly with material which does not wholly correspond to CB and secondly with material that does not correspond to CB at all. In addition material that does not quite achieve the status of being CB because it appears to be

confined to Zone S only will be dealt with in this chapter. The basic principles in setting up this material are identical with those used for establishing CB. For this reason section 3.2.3 is concerned with types of *SB words.

3.1 Starred Southern Bantu

It was outside the purpose of CpB. to note putative cognates between the seven languages under discussion unless they form part of CB. In certain isolated cases however, C.S. are quoted with reflexes in Zone S only.[1] Hence, the items emerging are distinguished from CB in that they are confined to Zone S and for the purpose of this study, will be referred to as starred Southern Bantu. (*SB)

3.1.1 Consonant Reflexes in C_1 position

Detailed lists of valid consonant reflexes oocuring in the seven languages are drawn up and provide a basic table of reference of consonants for each language. Any other consonants occurring within the language will therefore be considered 'invalid' for the present and be viewed

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1. See CpB. partial series (ps.) 119

in a different light. (See Chapters 4 and 5). The valid consonant lists facilitate the identification of putative direct reflexes in each language.

On comparison with the other languages, lists of putative direct cognates are set up and an inventory of putative starred Southern Bantu formulated. It is now possible, once an inventory of putative *SB is formulated, to check these reflexes against the CB list and to separate any other CB reflexes which have not been detected initially. Various inferences can then be made on the type of *SB word that emerges, both as to their meaning and as to whether they are radicals or stems. These tables of consonant reflexes provide a basic reference or framework without which it would not be possible to evaluate the various instances of apparent cognates.

The tables are explained further in the commentary before Table 1a at the end of this chapter. The basic list of starred consonant/vowel and consonant/vowel combination patterns have been re-arranged and enlarged.[2] The reflex patterns occurring in each of the seven languages in C_1

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2. See Appendix 5/1 CpB.

position have then been inserted by checking sound-shifts occurring regularly in items that are CB reflexes. Where there are insufficient examples or no examples at all, an X has been inserted. In certain cases an alternative pattern is placed in brackets; this is done because there are items that appear to contain instances of this reflex, but not as many as the one unbracketed.

3.1.2 Consonants in C_2 position

The rules governing reflex patterns in position C_2 are largely similar to those for C_1. Certain deviations are notes in Chapter 4 and yotised[3] consonants are noted in the Tables of consonants at the end of this Chapter.

3.1.3 Vowels in V_1 and V_2 positions

There are seven starred vowel characters to represent V_1 and V_2 in CB, each of wich may have high or low tones and in V_1, be either long (*VV) or short (*V). The seven

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3. This term is widely used in CpB., having first been introduced into the study of Bantu languages in the article by Guthrie: Bibl. no. 18c, pg 86.

basic CB vowels are:-[4]

i̤ ɨ̤

i u

e o

a

There are no long vowels in any of the seven languages under discussion, but the effect from *VV is reflected in the tone of the S.40s, S.21and the S.30 languages. See Tonal patterns 3.1.5 below.

In S.13 and S.12 there are five vowel phonemes, there being no close varieties of i and u as in CB.

i u

e o

a

S.21 also has five vowels, but has sporadic but not obligatory umlaut effect i.e. vowel change due to i or u. This however, is of no distinctive value and therefore need not be set out here. The vowel chart for S.21 is the same as that set out for S.13 and S.12 above.

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4. See CpB. Vol.I for full description of CB vowels.

S.41 and S.42 have five vowel phoemes, but under certain conditions there are two closer varieties i.e. conditioned variants of the mid vowels.[5] These are not reflected in the orthographies and have no bearing on this study.

i u

e o

a

S.33 and S.31 form a distinct group in that there are nine vowel phonemes. As in S.41 and S.42 there are conditioned variants for certain of the vowels.[6]

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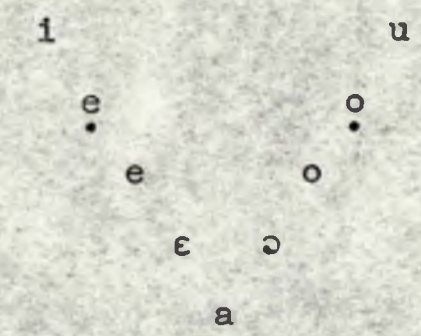
5. There do appear to be cases where o and e and the more open varieties ɔ and ɛ are not phonetic variants of the same phonological unit:-
   i) conditioned variants in S.41 and S.42
      -thɛ̂ŋga 'to buy' compare perfect - thengile
      -bɔna 'to see' compare perfect - bonile
   There is vowel harmony with the effect of close i on ɛ and ɔ.
   ii) Free variants in S.41 and S.42 which are used dialectally. (See Lanham Bibl. no.21 pp. 36 and 37).
   iii) obligatory in the relative constructions, which in languages of this area are a recognized special type of morpho-syntactic unit. (See, Westphal, Tindleni and Jimba: Bibl. no.41a)
   Also obligatory in certain lexical items e.g. S.41
   umntwana lówò 'that child'
   umlówò (1/2) 'a relative'

6. a) Vowel harmony, effect of close i on ɛ and ɔ, e.g.
   S.31 -hɛ̂ma 'to breathe' compare perfect -hémìlè
   S.33 -rɛ̂ka 'to buy' compare perfect -rèkile
   S.31/S.33 -bɔ̂na 'to see' compare perfect -bônè
   See Tucker: Bibl. no. 37b.

(cont. on next page...)



3.1.4 Distinctive Tonal Patterns

All the seven languages being studied make use of tonal distinctiveness, both in distinguishing lexical items and in morphosyntax. Since this study is concerned mainly with comparing lexical material, it is necessary to take into account such tonal distinctiveness as the material displays. Thus, the data has been taken from contexts of maximum tonal distinctiveness and variations in tone pattern from other contexts are ignored.[7] Two accents only are required in marking tonal distinctiveness since a single

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(... contd. from previous page)

6. b) but no discernible cause in the following,

S.33/S.31 kxhòmó (9/10) 'head of cattle'
S.33 swèú 'white'
S.31 ʃwèú 'white'

c) like S.41 and S.42 in the relative construction.

7. For example, S.12 dèngà 'sky, roof', but compare, nèdèngà 'and/with the sky, roof'

distinction between High (V́) and Low (V̀) tones on a $-C_1V_1C_2V_2$ unit in nominal stems and a $-C_1V_1C_2-$ unit in verbal radicals occurs in each language. There will thus be a possibility of four variations. However, in spite of the single distinction of tone on each CV pattern, there are a few cases where an apparent extra distinct tonal relationship has been noted. In those cases where this happens in reflexes of CB material, it is possible to correlate this third pattern with *V́V́ as opposed to *V́. This extra tone is marked by (V̂) and the regular *V́> (V̂) in these languages.

3.1.4a Nominal stems and Verbal Radicals in S.21

In S.21 there are three basic tonal patterns of behaviour in the nominal stems, but a fourth, less frequent pattern does exist. For clarity, each pattern is noted in conjunction with its CB starred form where possible, otherwise with a corresponding pattern occurring in other types of words.

e.g.

Pattern (i) *CV̀CV̀ (*-jàdà) > nɖàlà (9/10) 'hunger'

(ii) *CV̀CV́ (*-càkâ) > thàɦá (9/10) 'thick grass patch'

(iii) *-CV́CV́ (*-cíndí)> tʃhisíndí (7/8) 'squirrel'

(iv) *-CV́CV̀ (*-dʒímù) > mudzímù (3/4) 'spirit'

There is an apparent 1:1 correlation with CB in the nominals and similarly with the verbal radicals, where there are two basic patterns of behaviour.

e.g.

Pattern (i) *-CV̀C- (*-bàd-) > -βàl- 'count'

(ii) *-CV́C-(*-bʊ́y-) > -βʊ́y- 'come or go back'

There is however, an additional pattern of behaviour from *-CV̀V̀C-. This is only apparent in tenses where the tone of the radical has been projected onto the following syllable. This difference however does not appear to be represented in more than two of the tenses of the conjugation.

3.1.4b S.13 and S.12

These languages may also have their nominals and radicals taken in conjunction with CB nominal stems and verbal radicals, but there are further complications in the tones of the nominal stems of these languages. *-CV́CV̀ often turns up as -CV́CV́, especially in S.13, and often there are -CV́CV́ and -CV́CV̀ variants.[8]

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8. Examples of some of the complications in tone:- (anomalies where there is no consonant in C_1 or C_2).

(continued on next page..)

e.g.

Pattern (i) *CV̀CV̀ (*-jàdà) > nzàrà (9/10) 'hunger'

(ii) *CV̀CV́ (*-tàŋgá) > dàŋgá (5/6) 'cattle-post'

(iii) *CV́CV́ (*-cíndí) > tsíndí (9/10) 'squirrel'

(iv) *CV́CV̀ (*-dʒímù) > mudzímú (3/4) 'spirit'

but *CV́CV̀ (*-kúdù) > -kúrú 'big' in S.13

and -kúrú } 'big' in S.12
-kúrù }

In the verbal radicals however, there appears to be a 1:1 correlation with CB.

e.g. S.13

Pattern

(i) *-CV̀C- (*-bòd-) > -wòr-[9] 'become rotten'

(ii) *-CV́C- (*-búmb-) > -wúmb- 'mould pottery'

(... contd. from previous page)

8. i) *V́V̀ > V́
e.g. *-bʊ̀l (*-bʊ̀ʊ̀) > S.13 & S.12 imví (9/10) 'white hair'
*bʊ̀à > S.13 & S.12 imbwá (9/10) 'dog'
ii) Vocalic stems *$V_1C_1V_2$ > $V_1C_1V_2$
e.g. *yánà > mnàná (1/2) 'child'
See Bibl. no. 38.

9. The 'w' is not used in spelling any longer since it represents a glide of 'w' character, which is normal in a vowel sequence of which the second is o or u.

S.12

Pattern (i) *-CV̀C- (*-bòd-) > -vòr- 'become rotten'

(ii) *-CV́C- (*-bʉ́y-) > -vʉ́y- 'come'

3.1.4c S.33 and S.31

In these languages it appears that *-CV́CV́ and *-CV́CV̀ have fallen together to give High Falling to Low, but there is a fourth tone of High to Mid from *-CV́CV̀, in the nominal stems. This extra tonal pattern in both these languages correlates with *-CV́V́CV.

e.g. S.33

Pattern (i) *-CV̀CV̀ (*-jàdà) > tlàlà (9/10) 'hunger'

(ii) *-CV̀CV́ (*-cǎká) > ɬàɲá (9) 'dry grass'

(iii) *-CV́CV́ (*-címbí) > tshêpè (9/10) 'iron'

(iv) *-CV́CV̀ (*-pígò) > phîɔ (9/10) 'kidney'

but *-CV́V́CV̀ (*-bέ́édè) > lɛtsɛ́lɛ (5/6) 'breast'

and in S.31,

Pattern (i) *-CV̀CV̀ (*-jàdà) > tlàlà (9/10) 'hunger'

(ii) *-CV̀CV́ (*-càká) > tlhàxá (9) 'dry; standing grass'

(iii) *-CV́CV́ (*-címbí) > tshîpì (9/10) 'iron'

(iv) *-CV́CV̀ (*-pígò) > phîò (9/10) 'kidney'

and *-CV́V́CV̀ (*-béédè)> lẹtsélè 'breast'

However, in the verbal radicals there is a 1:1 correlation with CB e.g. S.33 and S.31,

Pattern (i) *-CV̀C- (*-bàd-) > -bàl- 'to count'

(ii) *-CV́C- (*-búy-) > -bọ́y- 'to come'

3.1.4d S.41 and S.42

In these languages in the nominal stems it appears that *-CV́CV́ and *-CV́CV̀ also have fallen together to give High Falling to Low and the -CV́CV̀ in the languages appear in the majority of observed cases to be from loan words or as direct reflexes of *-CV́V́CV.

e.g. S.41

Pattern (i) *-CV̀CV̀ (*-jàdà) > inǹàlà (9/10) 'famine'

(ii) *-CV̀CV́ (*-kùàdí)> iŋkwàlí (9/10) 'kind of partridge'

(iii) *-CV́CV́ (*-címbí)> intsîmbì (9/10) 'iron'

(iv) *-CV́CV̀ (*-kúdù) > -khûlù 'big'

-CV́V́CV̀ (-béédè)> ibẽlè (5/6) 'breast'

but isitúlò (7/8) 'chair'↔ Afrikaans 'stoel'

and S.42

Pattern (i) *-CV̀CV̀ (*-jàdà) > inʒàlà (9/10) 'famine'

(ii) *-CV̀CV́ (*-kùàdí) > iŋkwàlí (9/10) 'kind of partridge'

(iii) *-CV́CV́ (*-címbí) > insímbì (9/10) 'iron'

(iv) *-CV́CV̀ (*-kúdù) > -khûlù 'big'

-CV́V́CV (-bíádà) > umzálà (1/2) 'cousin'

but isikóló (7/8) 'school' ← Afrikaans 'skool'

However, in the verbal radicals there is the different correlation of *-CV́V́C-, where *-CV́V́C- is realised as (V́) and *-CV́C- is (V̂).

e.g. S.41 and S.42

Pattern (i) *-CV̀C- (*-bàd-) > -ɓàl- 'count'

Compare (i) *-CV̀V̀C- (*-cùùb-) > -ʄùɓ- 'skin'

(ii) *-CV́C- (*-búy-) > -ɓûy- 'come or go back'

but (iix) *-CV́V́C- (*-béét-) > -ɓéth- 'strike'

3.2. Putative Direct Cognates

With the regular correspondence of the vowels, consonants and tonal patterns determined for each language, it is now possible to detect putative direct cognates

occuring mainly in the seven languages under discussion, which therefore do not appear in the CB material.

3.2.1 *SB inventory of Putative Direct Cognates

Applying the rules for these sound correspondences (see the tables at the end of the chapter) and bearing in mind the description of the vowels and the tone patterns above, from the final list of possible cognates between the seven languages, a starred Common Southern Bantu (*SB) inventory is formulated, confined to Zone S and in particular to the languages under discussion.

Thus for example 'ph' in S.21 corresponds regularly with 'mɦ' in S.13 and S.12, 'ph' in S.33 and S.31 and with 'mp' in S.41 and S.42 as do 'nd', 'nz', 'tl' and 'nɮ' respectively. The vowel 'a' always corresponds to a reflex of CB *a, in common with the vast majority of Bantu languages. S.21 phándá, S.13 and S.12 mɦánzá, S.33 and S.31 phátlà and S.41 and S.42 impánɮà correspond regularly and a hypothetical starred form can be abstracted *-pándá of which the item in each language is a direct reflex. A

sample of the *B items which have been formulated and the reflexes occuring in the languages is given below; a) in nominal stems and b) in verbal radicals. The initial consonants of p,b, t, d, k, g, c, j, are given as the sample starred consonants.

3.2.1a Nominal Stems

Gloss	S.21	S.13	S.12	S.33	S.31	S.41	S.42	*B
forehead	phándá (9/10)	mhánzá (9/10)	mhánzá (9/10)	phâtlà (9/10)	phâtlà (9/10)	impânkà (9/10) 'bald head'	impânkà (9/10)	*-pánjá (9/10)
donkey	mbòngòlà (9/10)	mbòngóró (9/10)	mbòngóró (9/10)	pɔ̀kɔ̀kà (9/10)		imbòngòlà (9/10)	imbòngòlà (9/10)	*-bòngòdò (9/10)
kudu	thòlɔ́ (9/10)	nhòró (9/10)	nhòró (9/10)		thòlɔ́ (9/10)			*-tɔ̀dɔ́ (9/10)
(strepsiceros strepaceros)								
river	mulàmbò (3/4)				molàpò (3/4)	molapɔ (3/4)	umlàmbò (3/4)	*-dàmbɔ̀ (3/4)
flame	khâβá (9/10)				kxhâbò (9/10)	kxhâbò (9/10)		*-kábú (9/10)

Gloss	S.21	S.13	S.12	S.33	S.31	S.41	S.42	*SB
danger	ngòzì (9/10)	ndʒòdzì (9/10)	ndʒòdzì (9/10)	kòtsì (9/10)		ingòzì (9/10)	ingòzì (9/10)	*-gòjì (9/10)
hedge-hog	thǒní (9/10)	(ʃóní) (9/10)	(tʃkóní) (9/10)	ɬôn̄[10] (9/10)	tɬhôn̄ (9/10)	intlônì (9/10)		*-cónǐ (9/10)
udder	dámú (5/6)	zámú (5/6)	zámú (5/6)					*-jámú (5/6)

3.2.1b Verbal Radicals

foam	-ɸùɸum-	-pùpum-	-pùpum-			-phùphum-	-phùphum-	*-pùpum-
govern	-βús-	-wús-	-vús-	-bús-	-bús-	-ɓús-	-ɓús-	*-búcɨ-
thatch	-fúlel-	-pfúrir-		-rúlel-	-rúlel-	-fulél-	-fulél-	*-tʊ́ded-
leak	-bvúd-	-dùz-	-dùz-	-dùtl-	-dùtl-	-vùz-	-vùz-	*-dùj-
whisper	-hèβedz-	-zèwez-	-zèvɛs-			-sèɓez-	-sèɓez-	*-kèbedi-
accept		(-gàmut ʃir-	-gàmut ʃir-)	-àmohel-	-àmkel-	-àmukel-		*-gàmuked-
limp	-tùdz-					-ɬòts-	-tlhòts-	-ɬùzel- *-còdi-
anoint	-dódz-	-zòr-	-zòr-			-tlòts-	-tlòts-	*-jòdi-
hate		-zónd-	-zónd-			-zónd-	-zónd-	*-jóónd-

10. Final *-ni S.33 and S.31 -n̄

3.2.2 Statistics - *SB compared with CB

From the final list, which has been drawn up from the initial lists of semantic clusters[11], of approximately 1000 putative direct cognates of which ±550 are stems and ±450 are radicals, 220 putative *SB stems and 250 *SB radicals have been abstracted. The rest are either skewed in meaning or shape or both or are of known foreign origin. (See Chapters 4 and 5).

The proportions in percentages are:-

*SB stem bases = 43%

*SB radical bases = 55%

In comparison, from the original unscreened lists, approximately 27% are CB stem bases and 43% CB radical bases. See also 3.2.5 below.

3.2.3 Type of *SB item

As was noted in the Introduction to this chapter, the material confined to Zone S only is being dealt with in this chapter, and the basic criteria used in setting up

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11. See 1.2.3 above.

the putative *SB forms have been the same as that used for establishing CB starred forms. Thus, with a putative *SB inventory formulated, it is possible to observe the type of *SB item that emerges. Since the study is concerned with affinities between certain southern Bantu languages and Venda, the comparative series are considered with regard to possible evidence of relationship between S.21 and the other groups i.e. S.10, S.30 and S.40.

Three sets of lists each comprising a comparison of S.21 with two languages in a group i.e. S.21 with S.13 and S.12; S.21 with S.33 and S.31 and S.21 with S.41 and S.42, have been drawn up. Where there is a wider distribution of the C.S. within the seven languages than the three columns in the list, this has been duly noted. Observations, relying entirely on the data and not on historical or other hypotheses, have then been made on semantic groupings of the C.S. Each C.S. in its semantic cluster has been noted with its particular groups e.g. S.21 with the S.10 group in respect to vegetation and S.21 with the S.30s in respect to cattle-keeping. It is worth noting however, that a number of the tentative conclusions drawn from the semantic groupings

would seem to lead to a general conclusion that the present relative geographical position of the languages has existed for a long time. For example C.S. linking S.21 with the S.10 group have included trees, such as the marula, and this is consistent with the type of vegetation in the area where the relevant languages are spoken now.

3.2.3a Observations on Type

It has proved to be useful to quote all the known instances in the cases where a given semantic category occurs in one section only. By doing this, it is possible to make certain observations about the meanings present in the material common to S.21 and one or more of the other groups.

In each case it is S.21 that is compared with the relevant language or language group.

S.21 with S.10s

Animals of everyday life:

*SB -kúyó (7/8)'domestic animal'

*SB -kòɲjò (5/6) 'common house rat'

*SB -jùdá (5/6) 'toad'

*SB -bòŋgòdá[8] (9/10) 'donkey'

Trees and Plants.

*SB -pṻdà (3/4) 'marula (sclerocarya birrea)'

*SB -kíkídí (3/4) 'Mahogany (trichilia emetica)'

*SB -cèŋgèdè (3/4) 'bamboo'

*SB -càŋgà (11/10) 'reed'

*SB -nkʊ̀tè (3/4) 'castor-oil plant'

Foodstuffs:

*SB -kèdɔ̀ (3/4) 'fruit'

*SB -díɔ́ŋgà (3) 'biltong'

*SB -kàkɛ́ (3) 'milk'

*SB -dɔ̀dɔ̀ (5), (11) 'beer'

Human Noises:

*SB -pṻdududi- 'to ululate'

*SB -gɔ́med- 'to moan'

*SB -kèbedi- 'to whisper'

*SB -tʃɛ́ŋg- 'to chew'

*SB -dìnd- 'to cry persistently, groan'

There is practically nothing that lies outside the domestic scene that these languages have in common. This raises interesting questions about the common ancestry, at least on the female side.

3.2.3b

S.21 with S.30s

Wild animals and Birds:

*SB -kónkóní (9/10) 'wildebeest (Gorgon taurinus)'

*SB -cépé (9/10) 'springbok (Antidorcas marsupialis)'

*SB -dàú (9/10) 'lion (Leoleo)'

*SB -tòdó (9/10) 'kudu (Strepsiceros strepsiceros)'

*SB -pàdàpàdà (9/10) 'sable antelope (Ozanna nigra)'

*SB -nònè (9/10) 'cape oryx (Oryx gazella gazella)'

*SB -bìjí (9/10) 'zebra (Hippotigris burchelli)'

*SB -tùjà (9/10) 'giraffe' (Giraffa camelopardalis)'[12]

*SB -púngúdíá (9/10) 'black-backed jackal (Thos mesomelas)'

*SB -cónî (9/10) 'hedgehog (Atelerix frontalis)'

*SB -tùènè (9/10) 'baboon'

*SB -càmé (9/10) 'crane (Balearica regulorum)'

From this one would infer that the speakers of these language groups shared an experience in their hunting. This is in contrast with the situation in the previous section and might suggest some earlier relationship on the male side. Among the remainder of the examples cattle-keeping

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12. Compare CB ps. *-tuiga

in particular seems to point to the same conclusions, since this is an activity in which women do not engage.

Cattle-keeping:

*SB -pùdú (9/10) 'ox'

*SB -bòkó (9/10) 'bull'

*SB -càmbí (5/6) 'herd'

*SB -nàmáné (9/10) 'calf'

Crops:

*SB -nàgúá (9/10) 'bean (Vigna unguiculata)[13]

*SB -púé (9/10) 'sweet reed (Andropogon sorghum)'

*SB -càdí (9/10) 'cotton' (Asclepias fruticosa)

*SB -tókó (3/4) 'vegetable'

Mental Attitudes:

*SB -nìà (11), (14) 'malice, stubbornness'

*SB -bíèbí (5) 'sorrow'

*SB -dúá (14) 'laziness'

*SB - càdùkànyò (10) 'understanding'

*SB -dánkádó (5), (9) 'joy'

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13. In an article on the food habits of the Sotho-Tswana people, Dr. H.C. Franz mentions that one of the original principal crops of these people was beans and in particular he refers to dinawa or mixed kaffir bean - see Bibl. no. 16.

Family Relationships:

*SB -mé (1a/2a) 'my mother'

*SB -nā́ (1/2) 'husband'

*SB -tʊ́á (1/2) 'son'

*SB -kɔ́mbé (9/10) 'bachelor'

*SB -cɔ́dɔ́ (1/2) 'widow'

*SB -téà (5/6) 'infant'

The above examples would appear to indicate a link between these languages in familial terms.

3.2.3c S.21 with S.40s

Military and Political:

*SB -pí (9/10) 'army'

*SB -cìèbè (3/4) 'arrow'

*SB -kɔ̀jɔ̀mbè (9/10) 'quiver for spears'

*SB -cə̌b- 'to stab'

*SB -càngʊ́ (7/8) 'shield'

*SB -bʊ́cɨ- 'to govern'

*SB -kə́cud- 'to judge'

*SB -tèd- 'to pay tax'

Historically the S.40 group have displayed dominance militarily and politically over the surrounding groups and these examples appear to endorse this point.

Terrain:

*SB -tàbà (9/10) 'hill'

*SB -gʊ́á (5/6) 'precipice'

*SB -dʒà (7/8) 'site'

*SB -báŋgá (5/6) 'space'

*SB -dàmbɔ̀ (3/4) 'river'

Since terrain is significant for military operations, this category is not unsurprising. It seems significant that these are the only categories that are shared specifically between S.21 and the S.40s.

3.2.3d S.21 with S.30 and S.40

Sea:

*SB -gánjé (5/6) 'sea'

Sand, dust:

*SB -cábá (3/4) 'sand'

*SB -tùdì (11/10) 'dust'

These examples have been quoted as they are of significance in that,

a) the S.40s are the only languages whose speakers at present are in contact with the sea. The S.21 word for the sea lwánzé is an indirect cognate (5.3 below) and superficially seems to be more easily correlated with the S.40 word ulwâńkè (voiced lateral fricative) father than with the S.30 lewâtlè (unvoiced lateral fricative)

b) the sand and dust imply possibly an association of arid conditions.

3.2.4 Radicals and Stems

On observation, the relative number of radicals C.S. items is higher in the S.10 group in relation to S.21 than the other groups S.30 and S.40. There is a higher number of stem C.S. items in the S.30 group in relation to S.21. See also the calculations at the end of Chapter 6 on percentage of radicals and stems. Guthrie notes the relatively small number of radicals C.S. in the Western section (PB-A) of CB.[14] It is thus worth contrasting the

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14. See CpB. Vol.1 63.86

state of affairs in respect of stems and radicals, as this provides further evidence showing some variation in the relationship, in this instance between S.21 as related to the north (S.10) and S.21 with regard to the south (S.30), although the exact nature of this relationship is not easy to assess.[15]

3.3. Summary

The basic consonant reflexes in C_1 and C_2 positions occurring in each language from CB are tabulated for reference in determining direct as opposed to indirect cognates.

Vowel charts are listed and compared with CB and the distinctive tonal patterns for nominal and radical bases are described. For this study it is necessary to note only the distinctiveness of tone for comparison from language to language.

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15. 3.2.2 above shows the percentage of radicals as opposed to stems in the overall inventory for both CB and *SB.

A *SB inventory of items occurring in a C.S. is formulated. This is done from the putative direct cognates with the stipulation that the reflex should occur in at least two different languages from at least two different groups.

There are more stems than radicals in the original list of putative cognates, but in fact more *SB radical bases emerge in the inventory. This coincides with the result of the calculations of the percentage of CB radicals and stems.

On the level of semantic correlations, the observations that have been made under the various groups, provide no evidence of a different geographical distribution between them from the present day one. It would also appear that there are definite links between the groups based on the semantic categories and from which hypotheses may be made. (see 7.2 below)

Explanatory Note on Table 1 sections (a) - (j)

The sections of the Table are arranged from 1 (a) to 1 (j), The first column shows a starred consonant in conjunction with vowels and vowel/combinations, as well as nasal plus consonant in conjunction with the same vowels as the plain consonants, and finally the yotised consonant form.

The reflexes occurring in each of the seven languages are shown in the adjacent columns.

1) *(a) symbolises *(o) and *(ɛ) as well.
2) bracketed reflexes are alternatives, but statistically less numerous than unbracketed ones, or where no alternative is given, and the reflex is bracketed, this indicates a reflex with too few examples to be statistically significant.
3) Where two reflexes are given with no brackets, this indicates alternation of equal value.
4) X ='no or insufficient examples'. Where all the languages have insufficient examples of a particular starred form, the line has been cut out and is mentioned in a footnote.

Reflexes of CB

TABLE 1a *p

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*p							
*p(a)	Φa	pa	pa	fa	ha	pha	pha
*pi/e	Φi	pi	pi	fẹ	hẹ	phi	phi
*pi(a)	sw̆a	ps̆a	ts̆a	tʃha	ʃa	tʃha	ʃa
*pi̯	sw̆i	s̆i	s̆i	fi	hí	fi	fi
*pi̯(a)	sw̆a	ps̆a	ts̆a	tshwa	tʃhwa	tʃha	ʃa
*pu̯	fu	fu	fu	fu	hu	fu	fu
*pu̯(a)	fa	fa	fa	tshwa	tʃhwa	fa	fa
*pu(a)	pxa	pxa	pxa	pʃha	(ɓa)	tʃha	ʃa
*mp							
*mp(a)	pha	mɓa	mɓa	pha	pha	mpa	mpa
*mpi/e	phi	mɓi	mɓi	phẹ	phẹ	mpi	mpi
*mpi(a)	tsw̆a	ps̆a	ts̆a	ntʃha	nʃa	ntʃha	nʃa
*mpi̯	tshw̆i	ps̆i	ts̆i	phi	phi	ntsi	nsi
*mpi̯(a)	tsha	X	X	X	X	X	X
*mpu̯	pfu	pfu	pfu	X	X	X	X
*i̯p							
*i̯pa	ba	ɓa	ɓa	(tsha)	tsha	(i)pha	pha

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16. *mpu̯(a) and *mpu(a) do not have sufficient examples of reflexes of these consonant/vowel combinations.

TABLE 1b *b

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*b							
*b(a)	βa	wa	ʋa	ba	ba	ɓa	ɓa
*bi/e	βi	wi	ʋi	bẹ	bẹ	ɓi	ɓi
*bi(a)	zwa	X	X	ʤa	ʤa	ɕa	tʃa
*bɨ	zi	ẓi	ẓi	bi	bi	vi	vi
*bɨ(a)	dza	ẓa	ẓa	tswa	tʃwa	za	za
*bʉ	vu	vu	vu	bu	bu	vu	vu
*bʉ(a)	va	va	va	tswa	tʃwa	va	va
*bua	bɣa	bɣa	bɣa	(ʤwa)	(ʤwa)	(ɕa)	(tʃa)
*mb							
*mb(a)	mba	mba	mba	ṕa	ṕa	mba	mba
*mbi/e	mbi	mbi	mbi	ṕẹ	ṕẹ	mbi	mbi
*mbi(a)	X	X	X	X	X	X	X
*mbɨ	X	X	X	ṕi	ṕi	mvi	mvi
*mbɨ(a)	X	X	X	X	X	X	X
*mbʉ	mvu	mvu	ⱱvu	ṕu	ṕu	mvu	mvu
*mbʉ(a)	mva	mva	mva	X	X	mva	mva
*mbu(a)	m̃bɣa	mbɣa	mbɣa	ñtʃa	m̃bxa	nʤa	nʤa
*ɨb							
ɨb(a)	va	ɓa	ɓa	tsa̤	tsa̤	ɓa	ɓa

TABLE 1c *t

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*t							
*t(a)	ra	ta	ta	ra	ra	tha	tha
*ti/e	ri	ʧyi	ʧʃki	re̤	re̤	thi	thi
*ti(a)	X	X	X	X	X	X	X
*tị	tshi	tsi	tsi	ri	ri	si	si
*tị(a)	X	X	X	X	X	X	X
*tụ	fu	pfu	pfu	ru	ru	fu	fu
*tụ(a)	pfa	pfa	pfa	tshwa	tʃhwa	fa	fa
*tu(a)	rwa	twa	twa	rwa	rwa	thwa	thwa
*nt							
*nt(a)	tha	nda	nda	tha	tha	nta	nta
*nti/e	thi	ndi	ndi	the̤	the̤	nti	nti
*nti(a)	X	X	X	X	X	X	X
*ntị	X	tsi	tsi	X	X	X	X
*ntị(a)	X	X	X	X	X	X	X
*ntụ	pfu	pfu	pfu	X	X	X	X
*ntụ(a)	pfa	pfa	pfa	X	X	X	X
*ntu(a)	X	ntwa	ntwa	X	X	ntwa	ntwa
*ịt							
*ịt(a)	ʤa	ʤa	ʤa	tsha/sa	tsha/sa	tha	tha

TABLE 1d *d

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*d							
*d(a)	ɭa	ra	ra	la	la	la	la
*di/e	ɭi	ri	ri	lɛ	lɛ	li	li
*di(a)	ɭa	ʒya	ʤga	ʤa	ʤa	ʒa	ʒa
*dį	dzi	dzi	dzi	di	ɭi	zi	zi
*dį(a)	dza	dza	dza	tsa(aa)	tsa(sa)	za	za
*dụ	bvu	bvu	bvu	du	ɭu	vu	vu
*dụ(a)	bva	bva	bva	tswa	tʃwa	va	va
*du(a)	ɭwa	rwa	rwa	lwa	lwa	lwa	lwa
*nd							
*nd(a)	nda	nda	nda	ta	ta	nda	nda
*ni/e	ndi	ndi	ndi	te	te	ndi	ndi
*ndụ	mbvu	mbvu	ᵐbvu	tu	tu	mvu	mvu
*ndụ(a)	mbva	mbva	mbva	X	X	mva	mva
*ndu(a)	ndwa	ndwa	ndwa	twa	twa	ndwa	ndwa
*ɟd							
*ɟd(a)	dza	ʤa/ʃa	ʤa	(tsa)	(tsa)	la	la

17. Insufficient examples of *ndi(a); *ndį; *ndį(a).

TABLE 1e *k

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*k							
*k(a)	ɓa	ka	ka	ɓa	xa	kha	kha
*ki/e	tʃhi	tʃi	tʃi	se̱	se̱	si	si
*ki(a)	tʃha	tʃa	tʃa	sa	sa	sa	sa
*kį	tsh̆i	si	si	si	si	si	si
*kį(a)	tsh̆a	sa	sa	sa	sa	sa	sa
*kų	fu	pfu	pfu	fu	hu	fu	fu
*kų(a)	fa	fa	fa	ʃwa	ʃwa	fa	fa
*ku(a)	ɓwa	kwa	kwa	ɓwa	xwa	khwa	khwa
*nk							
*nk(a)	kha	ɓa	ɓa	kxha	kxha	ŋka	ŋka
*nki/e	X	X	X	kxhe̱	kxhe̱	X	X
*nki(a)	X	X	X	X	X	X	X
*nkį	tsh̆i	tsi	tsi	tshi	tshi	ntsi	nsi
*nkį(a)	tsh̆a	X	X	X	X	X	X
*nkų	pfu	pfu	pfu	kxhu	kxhu	mfu	mfu
*nkų(a)	X	X	X	X	X	X	X
*nku(a)	khwa	ɓwa	ɓwa	kxhwa	kxhwa	ŋkwa	ŋkwa
*ik							
*ik(a)	fa/(ʃa)	ga	ga	ʃa/kxha	xa	(ɬa)sa	sa

TABLE 1f *g

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*g							
*g(a)	Øa	Øa	Øa	Øa	Øa	Øa	Øa
*gi/e	yi	Øi	Øi	Øẹ	Øẹ	Øyi	yi
*gi(a)	ya	X	X	Øa	Øa	ya	ya
*gi	zi	zi	zi	Øi	Øi	zi	zi
*gi(a)	X	X	X	(tsa)	(tsa)	X	X
*gu	vu	bvu	bvu	Øu	Øu	vu	vu
*gu(a)	zwa	X	X	tswa	tswa	va	va
*gu(a)	wa	wa	wa	wa	wa	wa	wa
*ng							
*ng(a)	ŋga	ŋga	ŋga	ka	ka	ŋga	ŋga
*ngi/e	X	ndʒi	ndʒi	kẹ	kẹ	ŋgi	ŋgi
*ngi(a)	X	X	X	X	X	X	X
*ngi	nzi	nzi	nzi	tsi	tsi	nzi	nzi
*ngi(a)	X	X	X	X	X	X	X
*ngu	mvu	mvu	mvu	ku	ku	mvu	mvu
*ngu(a)	nzwa	nzwa	nzwa	tswa	tswa	mva	mva
*ngu(a)	ŋgwa	ŋgwa	ŋgwa	X	X	ŋgwa	ŋgwa
*ig							
*ig(a)	za	za	za	ka	X	za	za

TABLE 1g *c

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*c							
*c(a)	ʇa	sa	sa	ɬa but sɛ	tlha	ɬa	ɬa
*ci/e	si	si	si	sẹ	sẹ	ɬi	ɬi
*ci(a)	sa	sa	sa	sa	sa	sa	sa
*cį	si	si	si	si	si	si	si
*cį(a)	sa	sa	sa	sa	sa	sa	sa
*cų	su	su	su	su	su	su	su
*cų(a)	X	X	X	X	X	X	X
*cu(a)	twa	swa	swa	ɬwa	tlhwa	ɬwa	ɬwa
*nc							
*nc(a)	ʇha	sa	nsa	ɬa(tla)	tlha	ntla	ntla
*nci/e	tshi	tsi	tsi	tshẹ	tshẹ	ntsi	nsi
*nci(a)	tsha	tsa	tsa	tsha	tsha	ntsa	nsa
*ncų	X	X	X	tshu	tshu	ntsu	nsu
18							
*ncį	tshi	tsi	tsi	tshi	tshi	ntsi	nsi
*ncį(a)	tsha	tsa	tsa	tsha	tsha	ntsa	nsi
*įc							
*įc(a)	ʇa	sa	sa	(i)sa	(i)sa	(i)ɬa	(i)ɬa

18. Insufficient examples of *ncų(a) and *ncu(a)

TABLE 1h *j

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*j							
*j(á)	ɟa	za	za	tla	tla	za	za
*ji/e	ɟi	zi	zi	tsẹ	tsẹ	zi	zi
19							
*jụ	zu	zu	zu	X	X	X	X
*jụ(a)	za	za	za	X	X	X	X
*ju(a)	zwa	zwa	zwa	tlwa	tlwa	zwa	zwa
*ni							
*nk(a)	nɟa	nza	nza	tla	tla	nʒa	nʒa
*nki/e	X	X	X	X	X	nzi	nzi
*nji(a)	X	X	X	X	X	nza	nza
20							
*ij							
*ij(a)	ɟa	za	za	tsa	tsa	za	za

19. Insufficient examples of *ji(a), *jị, *jị(a)
20. Insufficient examples of *njị, *nkị(a), *njụ, *njụ(a), *nju(a).

TABLE 1i *m, *n

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*m							
*m(a)	ma	ma	ma	ma	ma	ma	ma
*mʉ(a)	nwa	mɲa	mɲa	nwa	nwa	nwa	nwa
*mu(a)	mɲa	mɲa	mɲa	nwa	nwa	nya	nya
*ɨm(a)	ma	ma	ma	ɛma	ɛma	(i)ma	(i)ma
*n							
*n(a)	na	na	na	na	na	na	na
*ni(a)	nya	na	na	na	na	na	na
*nɨ(a)	nya	nya	nya	nya	nya	nya	nya
*nʉ(a)	nwa	nwa	nwa	nwa	nwa	nwa	nwa
*nu(a)	nwa	nwa	nwa	nwa	nwa	nwa	nwa
*ɨn(a)	ɲa	ina	ina	ina	ina	ina	ina
*ŋ							
*ŋ(a)	ŋa	ŋa	ŋa	ŋa	ŋa	X	X

TABLE 1j *y

CB	S.21	S.13	S.12	S.33	S.31	S.41	S.42
*y							
*y(a)	Øa	wa/Øa	Øa	Øa	Øa	Øa	Øa
*yi/e	Øi	Øi	Øi	Øẹ/yi	Øẹ/yi	Øi	Øi
*yi(a)	X	X	X	X	X	X	X
*yị	Ø	Ø	Ø	Ø/yi	Ø/yi	Ø	Ø
*yị(a)	X	X	X	X	X	X	X
*yụ	X	Ø	Ø	Øu	Øu	X	X
21							
*ny							
*ny(a)	ña	nya	nya	na	na	nya	nya

21. Insufficient examples of *yụ(a), *yu(a).

Chapter 4

Indirect Cognates containing no wholly extraneous sounds

A.4 Addendum on items of possible Afrikaans or English origin

Chapter 4

"Indirect Cognates containing no Wholly Extraneous Sounds"

4.0 Introduction

The previous chapters have dealt with direct cognates i.e. items corresponding perfectly in shape and meaning with CB. In the field of Bantu languages, it is possible to discriminate between the items that correspond perfectly with CB and those that do not. Among these latter items that have some feature that distinguishes them from the valid reflexes, some degree of classification is also feasible. This classification is mainly concerned with the extent to which they deviate from full correspondence. From there it is necessary to take this one step further and to attempt to establish possible reasons for the deviations from full correspondence.

Thus, this chapter deals with material which at first sight has to be regarded as extraneous,[1] but in which on closer examination it is possible to detect special rules that include additional factors. For example, there are cases where a simple direct reflex of a nominal stem can be established in class 6, i.e. with prefix ma-, whereas the corresponding singular in class 5 has an initial consonant

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1. See 2.4 above.

that has to be regarded as a composite reflex of both the class 5 prefix and the stem consonant. These reflexes with additional factors will be dealt with in 4.2. Then too some consonants may be considered extraneous in certain positions only, for e.g. C_1 but not C_2 and these will be dealt with in 4.3. Finally, an addendum to this chapter is concerned with items in S.21 that appear to have Afrikaans or English origin. Somewhat surprisingly such items tend not to have many extraneous sounds and this is why they are discussed in an addendum to this chapter. It is therefore more convenient to examine this material as distinct from that which can only be considered extraneous in any context and which will be described further in Chapter 5.

4.1. Items Inadmissible as Valid Reflexes of CB

For a number of reasons, such as contact with neighbouring people speaking a different language, it is feasible that sounds from one language may have been adopted by another. These sounds may be termed 'intrusive', and may either be found as simple or complex features or complete items, being wholly or partially assimilated into the receptor language, or remaining completely unassimilated. However, certain sounds that at first sight appear to be extraneous, may ultimately prove not to be extraneous in all

contexts but in fact to be an intrinsic part of the language itself, although occurring only in certain morphological or phonological contexts. To distinguish these special cases, they will be referred to as 'partially extraneous'. Any sounds that are found to mark out a given item as not being a fully valid reflex of a CB item, will for the purpose of this argument be termed 'inadmissible'.

As indicated above, these inadmissible sounds may be;

a) an intrinsic part of the language, in certain morphological and phonological contexts only and therefore inadmissible in any other contexts, or,

b) in intrusions from another language which have been wholly assimilated into the receptor language, i.e. become wholly accepted into the phonetic structure of the receptor language. These are discussed in the Addendum; or,

c) in intrusions which have been either partially assimilated i.e. not completely accepted into the phonetic structure of the receptor language, or not assimilated at all, which are thus wholly unacceptable to the phonetic structure of the receptor language. (See Chapter 5.)

4.1.1 Skewed Items

Certain of these 'inadmissible' items are termed 'skewed'.[2] They may be skewed in either meaning or shape. The term 'skewed meaning' implies that the meaning of the item is different from the 'connector' (which is the meaning of the C.S. in question), although related to it. On the other hand, an item with 'skewed shape' would imply that the meaning of the item is the same as the connector of the given C.S. but that its shape has some feature which rules it out as a direct reflex. By extension items which contain a skewed shape or are skewed in meaning are termed 'skewed items'.

4.1.2 Extraneous Items

Apart from 'skewed' items, certain patterns or features entirely exclude the items that contain them from being admitted as a reflex of any CB item. These are called 'extraneous' shapes or items, and are indicated by ≠ which means 'extraneous to CB'.[3]

This chapter consists of a discussion of indirect cognates that contain no wholly extraneous sounds, whereas

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2. See CpB. 32.41-77.
3. See CpB. 32.81.

Chapter 5 deals with cognates that do contain wholly extraneous sounds. However, there are intrusions from non-Bantu languages, e.g. English and Afrikaans. These items cannot be suitably included in this chapter, but they do provide important information about the way alien words are incorporated and in fact wholly assimilated into the languages being studied. As has been stated, this will be dealt with in an addendum to this chapter following the summary and conclusions.

4.1.2a Partially Extraneous Sounds

For reasons of convenience it would be useful to provide in this chapter a full list of completely extraneous sounds, i.e. extraneous consonants and consonant/vowel patterns in order to identify the extraneous items. It would thus be possible to distinguish between wholly extraneous sounds and those which occur in certain contexts only and therefore are partially extraneous. However, since the necessary information is provided in the following chapter where wholly extraneous sounds are dealt with, reference can be made to that chapter.

Table 2 below consists of partially extraneous consonants only, since it is very rare for the quality of the vowel alone to cause an item to be treated as extraneous. (See 3.1.3 above.) An apparently rare example of where

a reflex is considered partially extraneous through a vowel is:-

*CB -kɔndɔ (3/4) 'track' > S.33 mɔkxhɔthɔ (3/4) (The final -o is wholly extraneous since as has been stated, this quality vowel can only occur in V_1 position provided there is a close vowel in V_2. As a regular reflex the vowel would be [ɔ]. (See description of vowels in Chapter 2 above.)

Table 2

Partially Extraneous Sounds (i.e. valid in certain contexts only)

S.21	S.13	S.12	S.33	S.31	S.41	S.42
p'			p'	p'	p'	p'
t'			t'	t'	t'	t'
k'			k'	k'	k'	k'
ts'				tsɔ, tso, tsu		
tʃ'			[4] tʃ'	tʃ'i, tʃ'e, tʃ'ɛ, tʃ'a		
ʃ			ʃ	sɔ, so, su		
tʃho, tʃhu				tshɔ, tsho, tshu		
b						
v						
g	g	g				
ph			ph	ph		
th			th	th		
ʈh						
kh			kh	kh	kh_2	kh_2
			kxh	kxh		

4. There is some evidence that tʃ' can be regarded as a

(Cont. on next page....)

4.2 Reflexes with additional factors

4.2.1 Class 5

Among the sounds mentioned above that occur in valid reflexes in certain morpho-phonological contexts, but which are in fact skewed sounds in others, are those occurring in particular languages in Class 5. In most of the seven languages under discussion, there is not a simple independent prefix in operation in Class 5 as in the majority of the other classes. Instead, in certain of the languages, there are two different reflexes which combine to produce a single sound i.e. the reflex of the prefix plus that of the consonant in C_1 position of the stem. For reasons of convenience in this study, this reflex will be called a 'double reflex'; as opposed to a 'single reflex', in which there is a simple reflex of a single starred consonant. A further complication is that the class 5 independent prefix in certain languages can only be described in terms of prefix scatter i.e. containing two or more reflexes of different starred prefixes in the class.[5] However, this does not happen in all the seven languages under discussion.

4.2.1a Single Sound Changes.

Firstly, the starred CB prefixes will be given with the

(.....cont. from previous page)
valid reflex in certain phonetic environments e.g. ntʃa 'dog' < *mbua, but as no other case has been found it is not possible to be more specific.

5. See CpB. 72.23 and Guthrie: Bibl.no.18b.

reflexes in the corresponding languages.

*CB di- (C.S. no.2204a) has reflexes in S.33 le-

S.31 le-

S.41 ili-

S.42 ili-

(S.21 ɬi-[6])

In S.21, S.41 and S.42, these prefixes occur mostly with monosyllabic and vowel stems, e.g.

S.21 [7]ɬi/ɬɔ/ma/ɬɔ 'eye'

S.33 le/iɬɔ/ma/ɬɔ

S.31 le/itlhɔ/ma/itlhɔ

S.41 ili/sɔ/ameɬɔ[8]

S.42 ili/sɔ/ameɬɔ

These are reflexes of *CB -yɬcɔ 'eye'.[9] In S.41 and S.42 the plural form does not have the regular sound-shift, *yɬc(a) > s(a), possibly due to the coalescence of ama + i > ame-.

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6. The sound ɬ does not occur outside this particular class 5 variant, in fact, the class 5 prefix in S.21 for other purposes could be described as a scatter.
7. The short vertical hairline is used to separate the prefix from the stem; the longer vertical hairline is used to separate the singular from the plural form.
8. Singular can mean 'bead' as well, with plural amasɔ.
9. CB C.S. no.2030.

*CB yi- (C.S. no. 2204c) has reflexes in S.41 i-

S.42 i-

This class 5 prefix occurs in S.41 and S.42 before nominal stems with more than one syllable and thus these languages too have prefix scatter in class 5. e.g.

S.41 isêlè/amasêlè < *CB -kédè 'frog'

S.42 isêlè/amasêlè

4.2.3b Double Sound Changes

*CB ji- (in footnote to C.S. no. 2204b) has reflexes in S.21 ɟi-

S.13 zi-

S.12 zi-

These prefixes are found as augmentatives in the above languages, often in a derogatory sense. e.g.

S.21 ɟikɔ̀lɔ̀mɔ́ (5) 'big head of cattle, huge bovine'

compare khɔ̀lɔ̀mɔ́ (9/10) 'bovine'

ɟithù (5) 'big thing, big creature, monster'

compare tʃhithù (7/8) 'thing'

In S.13 and S.12 the augmentative is found in combination with the same consonant change as is noted below with yɟ-. In a more detailed study of this phenomenon, it might be preferable to treat this particular case as *ji- + yɟ-.

e.g.

S.13 and S.12 zigómànáá (5) 'huge lout'

compare mukómànáá (1/2) 'boy'

zibembenene (5) 'big butterfly or moth'

compare tʃipembenene (7/8) 'flying insect'

*CB yi- (C.S. no. 2204d) has reflexes in S.21

S.13

S.12

S.33 Now obsolete, but vestiges

S.31 are found in certain nominals.

In S.33 and S.31 only traces of the presence of class 5 *yi- remain in the yotisation of the initial consonant of the nominal stem. e.g.

*CB -bééde (5/6) 'breast, udder' > S.33 and S.31

letswélè/mabélè

Verification can be made of the effects of *yi- the class 5 prefix on the nominal stem, by comparison of the class 6 plural form, where the stem is the regular reflex of *-bééde. These languages have subsequently used what looks like the dependent prefix shape as a suppletive independent prefix, le-, to a stem which already has the effects of the class 5 prefix yi-. It is not always possible to detect the regular reflex from the plural, which sometimes drops the

original stem and uses the yotised version with the class 6 prefix. e.g.

*CB -bókɔ̀ (5/6) 'arm' > S.33 letsɔ̂ɲɔ̀/matsɔ̂ɲɔ̀

maɲtsɔ̂ɲɔ̀ can only be treated as a direct reflex by inferring a yi augment on the stem, but compare,

S.31 leʈʃɔ̂ɲɔ̀/mabɔ̂ɲɔ̀

On analogy with the above example one can propose the same sound shift with,

S.33 letsɛ̀tɛ̀/matswɛ̀tɛ̀ 'rat' < *CB -bèndè 'striped rat'

Thus the class 5 prefix *yi- plus C_1 of the nominal stem undergo a sound change which is represented by a consonant different from the one which is the regular consonant. (See Table 1)

So also,

S.33 leʃo̩mè 'ten' < *CB -kúmè (ps. 323)

S.31 ʃo̩mè

The class 5 prefix *yi- operates regularly in S.21, S.13 and S.12. e.g.

*SB -kɔ̀nɟɔ̀ (5/6) 'common house rat (rattus rattus)'

S.21 fɔ̀nd̩o / maɲɔ̀nd̩ɔ̀

S.13 gɔ̀nzɔ̀ / makɔ̀nzɔ̀

S.12 gɔ̀nzɔ̀ / makɔ̀nzɔ̀

*S -púndú (5/6) 'lump, something bulbous, knot'

S.21 búndú / mapúndú

S.12 búndú / mapúndú

*SB-támá (5/6) 'cheek'

S.21 ʃámá / marámá

S.13 ʤámá / matámá

S.12 ʤámá / matámá

*CB -kèndè (5/6) 'testicle'

S.13 ʤèndè / matʃèndè

S.12 ʤèndè / matʃèndè[10]

In the following instance therefore, the S.21 reflex is skewed according to morpho-phonological rules in that there is no yotisation in the class 5 word:-

*SB -pàpú (5/6) 'lung'

S.21 ɸàɸú / maɸàɸú

S.13 βàpú / mapàpú

S.12 βàpú / mapàpú

S.33 letshwàfǫ́ / matshwàfǫ́

S.31 letʃhwàfǫ́ / matʃhwàfǫ́

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10. There is naturally a different rule where C_1 > *k and V_1 is either i or e, since in this case *ki or *ke have tʃi and tʃe as direct reflexes and in class 5 the double shift gives ʤi and ʤe.

It is useful having these processes of regular operation in S.21, S.13 and S.12 as the special class 5 sound change is only sporadic in the other languages and it thus assists in detecting similar but infrequent sound-shifts of this kind in other languages.

4.2.2 The Sequence Rule in S.21

In S.21 there is an apparent correlation between C_1 and C_2 in certain circumstances. This is related to a type of consonant harmony whereby C_2 reflects a sound change that C_1 undergoes. Therefore, while C_1 may be a regular reflex of a starred consonant, C_2 appears to be extraneous. On closer examination however, this C_2 appears to be a modified reflex behaving according to morpho-phonological rules in that the regular C_2 has undergone the same sound change as C_1.

I propose to call this type of correlation between consonants in C_1 and C_2 positions, the Sequence Rule.[11] It occurs with unvoiced and voiced consonants and can only be

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11. Compare Edmund Dahl's Law of dissimilation in consonants, "When two successive syllables each begin with an aspirate, the first of these loses its aspiration and becomes voiced" and Meinhof's Rule for nasal compounds whereby a nasal compound in C_1 is conditioned by the nasal compound in C_2. This is a feature of S.33. See Meeussen: Bibl. no. 26.

described within the morpho-phonology of the language.

4.2.2a Unvoiced Consonants.

There are three grades of any unvoiced consonants (C) in sequence pattern. These are,

1) Simple or Neutral consonant (Direct Reflex)
2) Aspirated or nasal by implication (Compare Voiced Consonants 4.2.2.b)
3) Ejective consonant (≠)

e.g.

1) Simple or Neutral Grade.

S.21 Φ(a) < *p(a)

r(a) < *t(a)

-ΦèΦèɖ- 'be blown about by the wind' < *CB -pèèp- 'blow as wind'

ɭurðΦè (11) 'mire, river-slime' < *CB-tòpè 6,9 'mud'

2) Aspirated (Nasal by implication) Grade

phéphò (9/10) 'wind' < *CB -pépò (9/10)

S.21 ph(a) < *np(a)

thòphè (9) 'mud, slush' < *CB -tòpè 6,9 'mud'

S.21 th(a) < *nt(a)

S.21 kh(a) < *nk(a)

phùkhá (9/10) 'animal' < *SB -pùká (9/10)

phóphó (9/10) 'wart' < *SB -pópó (9/10)

3) Ejective Grade, where consonants are ejective after certain prefixes, namely:-

Class 21 kʼu- (itself containing ≠ kʼ)

and secondary prefixes[12]

Class 7x/8x tʃhi-/zwi-

Class 11x ɭu-

and more rare

Class 14x βu-

e.g.

Class 21

kʼukʼáɭí 'small earthen-ware pot' (Compare kháɭí (9/10) 'pot')

kʼuʈʼóɲó 'small head' (Compare ʈhóɲó (9/10) 'head')

kʼutʼóβó 'small mat' (Compare thóβó (9/10) 'mat')

kʼutʃʼangá 'small pupil of the eye' (Compare tʃhángá (9/10) 'pupil')

Class 7x/8x

tʃhitsʼíð 'small kidney' (Compare tshíð (9/10) 'kidney')

tʃhipʼùkʼá 'small dangerous animal e.g. 'rat' (Compare phùkhá 'animal')

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12. In this instance it is necessary to distinguish between two different cases of prefixal behaviour i) where the basic prefix is used and normal sound-shifts in C_1 occur, and ii) where the class is used to indicate secondary meaning, such as the diminutive. These are indicated by the normal class plus x, hence for e.g. 11x and 14x (secondary classes)

tʃhikɔ̀ɮɔ̀mó 'small bovine' (Compare khɔ̀ɮɔ̀mó (9/10) 'bovine')

tʃhitándá 'small stick' (Compare thándá (9/10) 'stick')

tʃhitʃétʃé 'small baby'[13] (Compare tʃhétʃhé 1a/2a 'baby')
(10) 'babies'

less common,

Class 11x

ɮukándá 'skin of man' (Compare khándá (10) plural')

ɮupépó 'slight snap of chilly weather' (Compare phéphó (9) 'wind')

ɮutándá 'long rod, thin pole' (Compare thándá (9/10) 'pole')

ɮutʃétʃé 'baby' (Compare tʃhétʃhé (10) 'babies')

Class 14x

βutʃwótʃwánè 'very thin small beads' (Compare tʃhwótʃhwánè 'beads')

Where Grade 3 sounds cannot be accounted for by being in a secondary class, some reason has to be sought other than in the realm of direct cognates, and probably in material acquired from other languages e.g.

S.21 matɔ̀pè (6) 'soft mud'

compare with (1) and (2) above; here it is most likely a direct borrowing from the S.10 group matɔ̀pè (6) 'mud'. This will be substantiated further in the following chapter where

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13. more commonly in Class 8x.

more examples of ejective ≠ p', t', k', will be shown to correspond with the direct reflex from the S.10 group of which S.13 and S.12 are two languages under discussion from the group.

4.2.2b Voiced Consonants

Voiced consonants, like the unvoiced consonants, may also occur in certain contexts in which they would be considered eccentric. As compared with the unvoiced consonants, there are only two grades in the voiced consonants, the second of which occurs after certain secondary prefixes and which are eccentric.

1) nasalised voiced consonants which occur as regular reflex is for e.g. S.21 m̄búdzí (9/10) 'goat' < *CB budi

2) with a secondary prefix the variety found in regular reflexes when preceded by a homorganic consonant becomes a simple voiced consonant and would be considered extraneous. e.g.

Class 7x/8x

tʃhigɓmă 'small drum' (Compare ŋ̄gómá (9/10) 'drum')

tʃhidíl̩ó 'small plate' (Compare n̄díl̩ó (9/10) 'plate')

Class 21

kuɖɔ̀ 'small elephant' (Compare n̪ɖɔ̀ (9/10) 'elephant')

kuɖìl̪à 'small road' (Compare n̪ɖìl̪à (9/10) 'road')

and note also:

kudìndí 'small hole' (Compare mul̪ìndí (3/4) 'hole')

kudɔ̀ɸà 'a little blood' (Compare mal̪ɔ̀ɸa (6) 'blood')

kudàmbɔ̀ 'small river' (Compare mul̪àmbɔ̀ (3/4) 'river')

as kul̪- does not occur in class 21.

Class 11x

l̪ugwè-l̪uʈóní 'small leopard' (Compare ŋ̄gwè (9/10) 'leopard')

4.3 Consonants Extraneous in certain positions

As in 4.2 some consonants may occur as regular reflexes in the languages, but in certain positions be extraneous.

4.3.1 Unvoiced Consonants in S.41 and S.42

In S.41 and S.42, ejective and aspirated varieties of consonants p, t, and k are in Table 2 above as these sounds are extraneous in certain positions, e.g.

S.41 and S.42 isipani (7/8) 'span of oxen' p_1' ≠ ↔ Afrik. span because in C_1 in valid reflexes $*p_1 >$ ph_1, e.g.

*pá 'give' > -phá

S.41 isitena (7/8) 'brick' t_1' ≠ ↔ Afrik. steen.

S.42 itende (5/6) 'tent' t_1' ≠ ↔ Afrik or English.

because,

*t_1 > th in S.41 and S.42 e.g. *-tì 'say' > -thì

S.41 and S.42 isikali (7/8) 'scale' k_1' ≠ ↔ Afrik. skaal.

because,

*k_1 > kh in S.41 and S.42 e.g. *-ká 'pick' > -khá

In C_2, S.41 -kopol- 'tie oxen in pairs' p_2 ≠ ↔ Afrik. Koppel.

*p_2 > ph_2 e.g. -bôph- 'bind' < *-bóp-

S.41 and S.42 ikati (5/6) 'cat' t_2 ≠ ↔ Afrik. kat

*t_2 > th_2 e.g. *-béét- 'beat' > S.41 and S.42 -béth-

But *k_2 > k_2', e.g. S.41 and S.42 -bék- < *CB -béK- 'place'

Therefore kh_2 is extraneous, except in reduplication of kh_1

S.41 and S.42 -békh- 'to look at' kh_2 ≠. In S.42 k_2 occurring in regular reflexes is a free variant with non-ejective [k].[14] Ejective k_2 is the only case where an ejective sound is a direct reflex in these S.40 languages.

4.3.2 Nasal Augment

Further sounds that do not occur in valid reflexes in

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14. See Lanham: Bibl. no.21, pg.40 and 41, k = lenis unvoiced velar.

certain morphological contexts, and which are therefore considered to be skewed occur in radicals in C_1 position. These are unvoiced consonants which appear to correlate with starred nasal plus consonant, which may be termed an instance of a nasal augment (NA).[15] It may be a valid reflex in stems. However, any radicals which appear to have a reflex of *nC in first position must be considered 'skewed' in this study. This process occurs mostly in S.21, S.33, and S.31, but there are rarer cases of its occurrence in the other languages.

e.g.

*SB-kódu- 'be satisfied'

S.21 kh_1 ≠ -khólw- (NA)

S.33 kxh_1 ≠ -kxhôlw- (NA)

S.41 -khôlw-

S.42 -khôlw-

Although on terms of sound change C_1 in these examples from S.21 and S.33 have to be interpreted as involving a reflex of a nasal augment, there may well be some other

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15. Ref. CpB. 32.64 "the initial sound in the item in question corresponds to the first starred consonant of a C.S. preceded by a nasal consonant."

explanation. The similarity of sound with the S.40 languages could indicate contamination from these languages. On the other hand there are instances where this need not be the case, since there is no corresponding equivalent in the S.40 languages. For example the following appears to arise for no apparent reason.

*SB -tib- 'stop up' *ti > S.21 ri but S.21 thi < *nti
S.33 ri S.33 thi
S.31 ri S.31 thi

S.21 -thiβ- (NA)

S.33 -thib- (NA)

S.31 -thib- (NA)

S.41 -thiβaz- 'restrain' skewed meaning

S.42 -thiθ- 'restrain'

and

*CB -dim- 'become extinguished' *di > S.33 di but S.33 ti < *ndi
S.31 li S.31 ti

S.33 -tim- (NA)

S.31 -tim- (NA)

whereas in,

*SB -kátad- 'be concerned, weary of' *ka > S.21 ha S.21 kha < *nka
S.33 ha S.33 kxba
S.31 xa S.31 kxha

S.21 -kháthál- (NA)

S.13 -kátár-

S.12 -kátár-

S.33 -kxháthál- (NA)

S.31 -kxháthál- (NA)

S.41 -kháthál-

S.42 -kháthál-

The possibility of contamination from the S.40s. has to be considered since the corresponding sounds are regular reflexes in the S.40, but are governed by the nasal augment in both S.21, S.33 and S.31.

4.3.3 Partially Extraneous Patterns

The patterns indicated as extraneous on Table 2, section 4.1.2 above show consonant vowel patterns in S.31 extraneous only before certain vowels.

Thus,

S.31[16]

ʃɔ, ʃo, ʃu	and	sa, sɛ, se, si
tʃɔ, tʃo, tʃu		tsa, tsɛ, tse, tsi
tʃhɔ, tʃho, tʃhu		tsha, tshɛ, tshe, tshi

16. The distribution of these sounds is in agreement with the situation as described by Tucker. Since then a new generation has grown up which pronounces what has been regarded as extraneous sɔ, so, su.

are patterns occurring as regular reflexes of *c with each of the seven starred vowels. Therefore, items containing,

sɔ, so su and

tsɔ, tso, tsu tʃa, tʃɛ, tʃe, tʃi

tshɔ, tsho, tshu

are extraneous patterns. The others however, are not since

ʃa, ʃɛ, ʃe, ʃi are direct reflexes of *pi(a)

tʃha, tʃhɛ, tʃhe, tʃhi are direct reflexes of *pu(a).

Similarly in S.21 tʃho and tʃhu are extraneous patterns except where tʃh is the class prefix variant before a vowel.

In S.33 li and lu are not in Table 2 since they are wholly extraneous patterns. The regular reflexes of *dị and *dụ are di and du. Thus,

*-dịbà 'deep water' > S.33 sẹdìbà (7/8) 'fountain, source'

*-dụmid- 'assent' > S.33 -dùmel-

but, linɛ (9) 'linen' li ≠ English

mọluthẹré (1/6) 'lutheran' lu ≠

bọlumara (1a/6) 'bloomers' lu ≠

There is a further discussion of the reflexes of *dị and *dụ in S.33 and S.31 in 5.1.3 below.

In S.13 and S.12 in Table 2 above, it is shown that 'fe' is an extraneous pattern. As a regular reflex, 'f' would only occur before u and a after *p. In the C.S.

*CB -pèèm- 'to breathe', the regular reflex in S.13 and S.12 should be -pém-, and, the reflex of *CB -pémb- 'blow nose', should be -pémb-, however the reflexes are:

-fèm- 'to breathe'

-fémb- 'to blow nose'

Similarly with S.33,

*-pèèm' 'to breathe' > S.33 -ɦèm-

This is skewed as *pe > S.33 fɛ. In S.31 -hèm- is a regular reflex as *pe > hɛ.

4.3.4. Voiced stops in S.41 and S.42

In S.41 and S.42 it is likely that certain voiced stops occur as a result of back-formation. In these languages these simple voiced stops are regarded as wholly extraneous and therefore will be dealt with in Chapter 5 (5.1.4).

4.4 Summary and Conclusions

The adoption of an alien sound in one or two instances may open the way for it to become an integral part of the language.

Certain items which do not correspond regularly to a CB item may be

a) skewed in meaning or shape

or,

b) partially or wholly extraneous. These may be termed

spurious reflexes in that they are indirect or foreign. They may appear to display regular sound-shifts, but have no relationship with CB.

It is rare that the quality of a vowel alone causes an item to be treated as extraneous. Certain consonants, consonant-combinations and consonant/vowel patterns may be extraneous under certain conditions. These conditions may be:-

a) in certain consonant positions in the radical or nominal
b) in certain consonant/vowel patterns
c) in certain consonant sequences
d) after certain prefixes e.g. classes 5, and secondary prefixes 7x, 11x, 14x and class 21.

Certain sounds in C_1 appear to correspond to *NC-, i.e. with a nasal augment. This does not occur in radicals in C_1 in CB, therefore the sound is considered extraneous in this context. This happens in languages S.21, S.33 and S.31. However, while in these languages there appears to be a reflex of a nasal augment in certain radicals, it has to be pointed out that there is a frequent similarity in sound between C_1 in these radicals in the languages in question and the S.40 group. As was noted, this fact opens the possibility that some of the radicals that have to be interpreted as commencing with a nasal augment could be treated as direct loans from S.41 or S.42. Therefore, the

fact that extraneous sounds may occur in radicals but not in nominals or vice versa, justifies the original decision to handle the constituents of the lexicon separately.

Ejective, p', t', k' in S.21 have a high degree of correspondence with p, t, k in the S.10 group where it is a regular feature.

Final note:

There are other cases where certain sounds from a foreign source have been incorporated, without systematic assimilation. Instead they contain extraneous features derived from the source language. This is dealt with in detail in the following chapter.

Addendum on items of possible Afrikaans or English origin

A.4 Introduction

It has been mentioned earlier in the chapter, (4.1), that certain parts of the lexicon of S.21 have their origin in some other language. Although such items are not wholly free from extraneous sounds nevertheless for the most part they are free from them and therefore a discussion of such sounds may appropriately form part of this chapter. In the compilation of this work, it was decided to note instances of borrowings from non-Bantu languages and a great amount of this material appeared to be of Afrikaans origin. However, the

Afrikaans language has to be attributed largely to the use of High Dutch in this part of Africa from the middle of the seventeenth century. It would lie outside the scope of this thesis to try to determine whether the intrusions in question came from Afrikaans rather than Dutch.[17] As a result the only course open is to set up correspondences for words of apparent Dutch origin on the basis of the present day Afrikaans pronunciation.

On closer examination of this intrusive material and on comparison with similar material in the other languages and in particular S.33, it has emerged that it is possible to set up regular sound correspondences for some of this foreign material in S.21.

Comparing items in S.21 and S.33 that appear to share a common origin in Afrikaans items, it is possible to distinguish two types of apparent Afrikaans intrusions in S.21. These will be illustrated below. This same exercise has been carried out for S.33, S.41 and the S.10 languages and in no other case is there anything comparable

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17. The evidence seems to show that contact with Dutch speakers may go back as far as 250 years, see Bibl.no.42. Similarly, the difficulty of obtaining evidence as to how High Dutch was spoken at the earlier period has ruled out any attempt to use this language as the point of reference.

to the regularity of correspondences which has been established for S.21. Also, since this study is concerned with S.21 as the focal point, no details are given of the Afrikaans material in these other languages.

A.4.1 Evidence based on single consonants

A.4.1a Apparent indirect borrowings

In words of this type, S.33 unvoiced stops correlate with voiced stops in S.21. If this study were not being conducted with S.21 as the language of reference, it would clearly be desirable to set up the rules for Afrikaans loans in S.33 first, but this would add little to the relevance of the material being investigated. So for economy of presentation, the S.33 item is presented without any explanation. Since in almost all cases the intrusions retain their original meanings, there is no need to quote glosses more than once. They are therefore given with the Afrikaans item.

S.33	S.21
p'	b
mp	mb
t'	d
k'	g

e.g.

S.33 pâtà (9/10) (Afrik. pad[18] 'road') ↔ [19]S.21 bádá (9/10)

S.33 pàmpìrì[20] (9/10) (Afrik. papier 'paper') ↔ S.21 bàmbírí (9/6)

S.33 balaka (9/10) (Afrik. balk 'beam') ↔ S.21 bálágà (5/6)

S.33 kèpìsi (9/10) (Afrik. kap[21] 'cap') ↔ S.21 gébísi (9/10)

S.33 pêrè[22] (9/10) (Afrik. perd 'horse') ↔ S.21 beré (9/10)

A.4.1b Evidence for direct borrowing from source language

It is worth noting that in none of the cases cited under this heading is there any evidence of a parallel intrusion into S.33, which distinguishes this material from that in A.4.1a above.

a) Afrikaans:

i) C_1 - Alveolars represented by voiced dentals (compare the sound correspondences in the previous section)

Afrik. d, t ↔ S.21 ɖ

Afrik. l ↔ S.21 ɭ

Afrik. n ↔ S.21 ɳ

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18. Pronounced [pat].
19. This sign is used to indicate regularity of correspondence.
20. Tonal behaviour is like prefix + disyllabic stem.
21. Assumed from Afrik. as there are no other examples of words of English origin via S.33 and also the possible Afrik. pronunciation of English 'cap' [kep].
22. See 3.5.1b rule (iii) below. This could have come from Afrik. plural perde 'horses', where the 'borrowed' 'd' is not pronounced.

e.g.

Afrik. toom 'bridle' ↔ S.21 ɖómú (9)

Afrik. doppie 'percussion cap' ↔ S.21 ɖóbi (9)

Afrik. duur 'expensive' ↔ S.21 - ɖúr-

Afrik. lantern 'lantern' ↔ S.21 ɭàŋɖéɾè[23] (5/6)

ii) C_2 - unvoiced stops ↔ voiced stops

and in addition, alveolars 't' and 'd' ↔ dental 'ʈ' and 'ɖ'.

e.g.

Afrik, doppie 'percussion cap' ↔ S.21 ɖóbí (9)

Afrik. ketting[24] 'chain' ↔ S.21 géɖáné (5/6)

Afrik. letter 'letter of the alphabet' ↔ S.21 ɭéɖéɾè (5/6)

iii) C_3 - alveolar 't' ↔ dental 'ʈ'.

e.g.

Afrik. bord[25] 'plate' ↔ S.21 bóɾoʈó (9/10)

Afrik. naald[25] 'needle' ↔ S.21 nálẹʈe (9/10)

b) Non-Afrikaans origin

alveolar 't' ↔ dental 'ʈ'

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23. Informant Victor Ralushai does not agree with this form, prefers kaŋɖeɭa. This is also an example of the same sound correspondence.
24. Pronounced [ket ŋ].
25. Bord pronounced [bɔrt] and naald pronounced [na:lt].

e.g.

English 'tar' ↔ S.21 ṭírí (9)

Unknown[26] 'tickey (3[d]) ↔ S.21 ṭíkí (9/10)

A.4.2 Consonant Combinations in Afrikaans

The only consonant combinations found in S.21 are homorganic nasals combined with voiced consonants. In this section, Afrikaans material containing other types of consonant combinations has to be examined in order to establish the rules of correspondence.

A.4.2a In verbs

Verbs in source language beginning with consonant combination 'st' and 'sp', drop the 's', but the original presence of the 's' is correlated with an absence of voicing. This is a constraint on the unvoiced voiced stop correspondence described in A.3.1b above.

e.g.

Afrik. stryk 'to iron' ↔ S.21 -ṭérek-

Afrik. spel 'to spell' ↔ S.21 -péleṭ-

(These are futher examples of the presence of a dental

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26. Used in S.A. English.

consonant which seems to be a characteristic of direct borrowings from Afrikaans.)

A.4.2b In nominals (i)

In nominals formed from words beginning with consonant clusters 'st' and 'sk' (there are no examples of 'sp', but 'sp' is expected to arise in parallel with 'st' and 'sk'), 's' becomes class 7 prefix, alveolar 't' becomes dental 'ţ' and s ↔ sC̥.

e.g.

Afrik. stasie 'mission station' ↔ S.21 tʃhiţási (7/8)

Afrik. straf[27] 'to punish' ↔ S.21 tʃhiţárafo (7/8) 'punishment'

Afrik. skip 'ship' ↔ S.21 tʃhiképé (7/8)

Afrik. skaap 'white or coloured blanket' ↔ S.21 tʃhikápá (7/8)

Afrik. sleg[28] 'bad' ↔ S.21 tʃhiḷéñá (7/8)

Where words begin with single 's' the consonant is then treated as C_1 and a class 7 prefix is added. There seems to be a false analogy here with 's' in a cluster.

e.g.

Afrik. seep[29] 'soap' ↔ S.21 tʃhisíbè

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27. Pronounced [stəraf]
28. Pronounced [slɛx]
29. Pronounced [se:p]

A.4.2c In nominals (ii)

In nominals formed from words beginning with consonant combination 'b' + consonant, 'b' becomes class 14 βu-

e.g.

Afrik. blik[30] 'billy-can' ↔ S.21 βulégé (14)

Afrik. brood[30] 'bread' ↔ S.21 βurótho (14)

Afrik. broek 'trousers' ↔ S.21 βurúkhú (14)

Afrik. brief 'letter' ↔ S.21 βuríɸí (14)

A.4.2d In nominals (iii)

A combination of nasal with a voiceless consonant in second position in Afrikaans is represented by a homorganic nasal compound in which the nasal is syllabic in S.21. The consonant in question obeys the above rules, such as voicing of consonants.

e.g.

Afrik. tent 'tent' ↔ S.21 dénde (9/10)

Afrik. hemp 'shirt' ↔ S.21 ɦémbé (9/10)

Afrik. donkie 'donkey' ↔ S.21 doŋgí (9/10)

A.4.3 In Vowels

A definite pattern of correspondence emerges between vowels in Afrikaans loans in S.21 and the source language itself.

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30. Pronounced [blək], [broət].

Table 3

Vowel correspondences:-

'aa'[31] [a:] ↔ S.21 'a' e.g.
Afrik. saal 'saddle' ↔ S.21 sálá (9/10)

'a' [a] ↔ S.21 'a' e.g.
Afrik. sak 'sack' ↔ S.21 sága (5/6)

'ee' [e:] ↔ S.21 'i' e.g.
Afrik. seep 'soap' ↔ S.21 tʃhisíbè (7/8)

'e' [ɛ] ↔ S.21 'e' e.g.
Afrik. deksel 'plate' ↔ S.21 dékéséla

'y' [əi] ↔ S.21 'i' e.g.
Afrik. pyp 'pipe' ↔ S.21 bíbí (9/10)

'ei' [əi] ↔ S.21 'ei' e.g.
Afrik. seil 'canvas' ↔ S.21 seila (9)

'i' [ə] ↔ S.21 'e' e.g.
Afrik. gif 'poison' ↔ S.21 tʃhéfu (7)[32]

'ie' [i] ↔ S.21 'i' e.g.
Afrik. brief 'letter' ↔ S.21 βurífí (14)

'oo' [o:] ↔ S.21 'o' e.g.
Afrik. skool 'school' ↔ S.21 tʃhikóló (7/8)

'o' [o] ↔ S.21 'o' e.g.
Afrik. rok 'dress' ↔ S.21 rógó (9/10)

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31. Afrikaans vowels given first.
32. The differenceein C1 in S.21 from the usual correspondence could conceivably be due to the following vowel, but as no further examples have been found, no rule can be established.

'ui' [œy] ↔ S.21 'i' e.g.

Afrik. kruiwa 'wheelbarrow' ↔ S.21 gíríβànà

'u' [œ] ↔ S.21 'o' e.g.

Afrik. juk 'yoke' ↔ S.21 ʤógó (9/10)[33]

'oe' [u] ↔ S.21 'u' e.g.

Afrik. broek 'trousers ↔ S.21 βurúkhú (14)

But, 'e' after labials ↔ S.21 'u'

e.g.

Afrik. lepel 'spoon' ↔ S.21 ɭébuɭa[34]

A.4.3a In Final vowels

Words in the source language ending with a consonant have an additional vowel in S.21. The quality of this vowel depends on what the final consonant of the source language is.

In S.21

-u follows 'f' and 'm' (labial components in articulation)

e.g. Afrik. half 'half' ↔ S.21 ɦáfú

Afrik. graaf 'spade' ↔ S.21 ɦaráfu (9/10)

Afrik. toom 'bridle' ↔ S.21 ɖómú (9/10)

Afrik. dam 'dam' ↔ S.21 dámú (5/6)

-i tends to follow 's', 'n' and 'r' (alveolars)

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33. Pronounced [yək] in Afrik. Initial sound in a word like this is represented by 'd ' in S.21

34. This association of labials with 'u' is noted further in A.4.3a below.

Afrik. plaas 'farm' ↪ S.21 bùlasi (9/10)

Afrik. glas 'glass' ↪ S.21 ɲálási (5,9/6)

Afrik. meneer 'mister' ↪ S.21 munéri (1/2)

Alveolar 'n' has either 'i' or 'e' after it

e.g. Afrik. pan 'flintlock' ↪ S.21 báni (5/6)

Afrik. kalkoen 'turkey' ↪ S.21 gàlàkúni (5/6)

Afrik. ketting 'chain' ↪ S.21 géɟánè (5/6)

Afrik. diaken 'deacon' ↪ S.21 ʤágánè[35] (5/6) 'native convert to Christianity'

-o follows 'al' and verbo-nominal stems

Afrik. skaal 'scale' ↪ S.21 tʃhikálo (7/8)

Afrik. straf 'to punish' ↪ S.21 tʃhitárafo (7/8)

Afrik. keer 'to divert' ↪ S.21 mugéro (3/4) 'water-furrow'

-a follows 'el', 'il' and 'ul'

Afrik. deksel 'plate' ↪ S.21 dékéséla (5/6)

Afrik. seil 'canvas' ↪ S.21 séila (9/10)

Afrik. lepel 'spoon' ↪ S.21 lébula (5/6)

Otherwise the final vowel in S.21 is a repetition of the final vowel in the source language.

e.g.

Afrik. pad 'road' ↪ S.21 bádá (9/10)

Afrik. kerk 'church' ↪ S.21 gèrègé (9/10)

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35. Afrikaans dia ↪ ʤa in S.21.

Afrik. beker[36] 'mug' ↔ S.21 bígiri (9/10)

Afrik. pot 'pot' ↔ S.21 bódó (9) or (5) (according to size)

Afrik. boek 'book' ↔ S.21 búgu (9/10)

A.4.3b In Epenthetic Vowels

In a number of cases noted when dealing with consonants there were epenthetic or anaptyctic vowels between the sounds that correspond to the consonants in a cluster in the source language. It now remains to note that the quality of these vowels is the same as that of the additional final vowel described in the previous section.

i) Final consonant cluster in the source language; the final vowel in the item in the source language is repeated, e.g.

Afrik. bord 'plate' ↔ S.21 bóroṭó (9/10)

Afrik. dorp 'village' ↔ S.21 ḍoróbo (9/10)

Afrik. kerk 'church' ↔ S.21 gèrégé (9/10)

Afrik. vorm 'to mould bricks' ↔ S.21 foromo (9) 'mould used in making bricks'

Afrik. kombers 'blanket' ↔ S.21 gùmbésé[37] (5/6)

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36. Pronounced [be:kər]
37. Afrik. kombers 'blanket' - if the final consonant cluster was pronounced [rs] at the time of its adoption then '-rs' of the source language seems to have been simplified to 's'.

But,

Afrik. boks 'box' ↔ S.21 bógisi (5/6)

the final vowel of S.21 appears to depend on the quality of the final consonant of the source language.

ii) Epenthetic vowels in initial consonant cluster; the same vowel as the one following is inserted in the consonant cluster.

e.g.

Afrik. krap 'to scratch' ↔ S.21 gárábá (5/6) 'native just returned from work in town'

Afrik. knoop 'button' ↔ S.21 gúnubú (9/10)

Afrik. kruiwaen 'wheelbarrow' ↔ S.21 gíríβànà (9/10)

iii) Initial bilabials with laterals insert -u-. (Compare final -u after labials above)

e.g.

Afrik. plank 'plank' ↔ S.21 búlaŋga (5/6)

Afrik. plaas 'farm' ↔ S.21 búlasi (9/10)

Afrik. blik 'billy-can' ↔ S.21 βulégé (14)

Afrik. bloot 'ride without saddle' ↔ S.21 βulódó (14)

A.4.4 Conclusion

Loans from non-Bantu languages, in particular from Afrikaans or from earlier High Dutch origin, appear to have been adopted systematically into S.21 from two possible

sources, one directly from 'Afrikaans' and the other indirectly, via S.33. The presence of a dental consonant seems to be a feature of items borrowed directly from Afrikaans.

Chapter 5

"Indirect Cognates containing Wholly Extraneous Sounds"

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"Indirect Cognates Containing Wholly Extraneous Sounds"

5.0 Introduction

As defined in the Introduction to the study (1.3 above), putative cognates that do not correspond perfectly in shape, sound and meaning to CB and to each other, are considered to be indirect cognates. This chapter is concerned with those indirect cognates that contain wholly extraneous sounds, i.e. sounds which under no circumstances can be classified as valid reflexes of any CB feature and which would therefore entirely exclude the item that contains them from being admitted as a regular reflex of any CB item. Possible reasons for sources of these extraneous sounds, such as derivation through back-formation and dialectal contamination, will be considered. The click consonant which is a feature of certain of the southern Bantu languages under discussion, will be examined and quantified in respect to non-click material and similar extraneous features occurring in the various languages will be compared. The possible origins of some of the extraneous material will be discussed in an addendum to this chapter.

5.1.1 Consonants Extraneous in all positions.

In the previous chapter (4.1.2) a complete list of all partially extraneous consonants has been given and Table 4 below shows wholly extraneous consonants i.e. those which are extraneous in any position.

Table 4

S.21	S.13	S.12	S.33	S.31	S.41	S.42
d	d	d	d (t)	d (t)	d	d
	b	b			b	b
	v	v	v (f)			
			g (k)	g (k)	g	g
d ɦ	d	d				
h			x		x	x (h)
	ʃ	ʃ	b		ʃ	
	th				ch	
					kx'	kx'
					ɦ	ɦ
					r	r
					ts'	ts'
						kl'
					ʒ	
					ɣ	
					tʃ	

S.21	S.13	S.12	S.33	S.31	S.41	S.42
			!		ʔ, ! , ɓ, ʔ, !, ɓ [1]	

5.1.2 Extranecus C_2

While the sounds in Table 4 may be considered extraneous in any position, certain correlations between C_1 and C_2 can be noted. There appears to be a relationship between C_1 and C_2 such that when C_1 is extraneous, there is a higher probability that C_2 will be extraneous. (Compare the Sequence Rule in S.21 (4.2.2 above) linking C_1 and C_2).

e.g.

S.21	ǰɓǵ (5/6)	Afrik. juk yoke	ǰ ∠ , g ∠
	-ǰàk-	'tread, trample on'	ǰ ∠ , k ∠
	-dɔ̀b-	'pick up'	d ∠ , b ∠
	ḥɔ̀ḥɔ̀yɓ (5)	'something soft'	ḥ ∠ , ḥ ∠

This process occurs in the other languages as well.

e.g.

S.13	-dàb-	'splash with mud'	d ∠ (in radicals) , b ∠

1. For variations of these clicks and description thereof see 5.2.1 below.

S.12	-ʃə̀v-	'blame'	ʃ ∉ , v ∉
S.33	-xá!-	'place in order	x ∉ , ! ∉
S.41	-gé5-	'stagger'	g ∉ , 5 ∉
S.42	-bád-[2]	'reach'	b ∉ , d ∉

5.1.3 Alternative Consonants

It is imperative to distinguish two different cases of 'di' and 'du' in S.33 and S.31 in addition to 'di' and 'du' as starred reflexes. These two also occur as part of a complete series in which 'd' occurs with any one of the vowels. This can be distinguished from the other case where 'd' occurs only with 'i' and 'u', and 'ɨ' would occur before the other vowels. S.33 'di' and 'du' are equal to S.31 'li' and 'lu' (and in certain dialects of S.31 'di' and 'du') and these are direct reflexes of *dį and *dų. However, extraneous de-, da-, and do-, may alternate with ejective t , and are used in free variation. Therefore, in those cases where 'di' and 'du' alternate with ejective t , these sounds also have to be considered extraneous in this particular context. (see 4.3.3 below) The fact that the dictionary gives both

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2. In S.42 'd_2' occurs mainly where C_1 is extraneous

dipi (9/10) } and
tipi (9/10) } 'dip, place where sheep or cattle are treated with dip' English

and

dinare (9/10) } and
tinare (9/10) } 'dinner' English

would seem to show that this 'd' occupies a different place in the system of sounds of the languages from the 'd' of Bantu origin, which alternates in complementary distribution with 'l' and not with 't'; 'g' and 'k' also are free variants in extraneous items e.g.

'gɛsɛ' alternates with 'kɛsɛ' from English 'gas'.

There is an apparently similar but in fact slightly different situation in S.42, where 'h' is placed in brackets after 'x' in Table 4. These two are normally free variants in extraneous items, but there are a few exceptions e.g.

-hɔ̀l- 'drag'

-xɔ̀l- 'draw wages'[3]

Although valid C.B. consonant reflexes are attested by regular sound correspondences in the various languages, in certain cases there appears to be more than one reflex

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3. Reference Lanham. Bibl. no.21 p.50

of a given starred consonant. Where the discrepancy statistically is not marked, both reflexes are given, (see Tables at end of Chapter 3) and are noted as optional variants. Nevertheless, in some cases there is a decidedly higher incidence of one reflex as opposed to another. In such cases the consonant with the greater frequency is selected as the valid reflex. The consonant with the lower frequency, if not occurring already as a reflex of another starred consonant, will then be considered extraneous. There would appear to be some correlation in the case of the l/d pair below between the occurrence of 'd' and the class 11 prefix.

e.g.

*d(a) > S.41 and S.42 l(a)

But,

S.41 and S.42 -dè < *-dè 'long' (* $\rightarrow^{4}$ -le)

and udôɓò (11) < *-dɔ̂bò 'fish hook' (* → -lɔ̂bò)

S.42 udòŋgɔ́ (11) < *-dòngɔ́ 'clay' (* → -lòngɔ́)

S.41 udòŋgwe (11) < *-dòngɔ́ 'clay'

*t(a) > S.41 and S.42 th(a)

---

4. → Should become in a regular reflex

but,

udàkà (11) 'mud' < *-tàkà 'soil' (* → -thàkà)

-dùmb- < *-tùmb- 'swell' (* → -thumb-)

-dùdum- < *-tutum- 'thunder' (* → -thuthum-)

*g(a) > S.33 ø[5] (a)

S.33 -ọ̀n- < *-gòn- 'shore'

ẹ̀ẹ́hé (5/6) < *-gé- 'egg'

5.1.4 Extraneous Consonants resulting from Back-Formation

The extraneous 'd' in the S.40 languages mentioned in the section above, does occur through back-formation. This phenomenon results when there is a starred form in class 10 plural only for a certain item and a singular form appears to have developed subsequently from the class 10 item. The nasal is dropped when a singular class prefix is added and this would then make this class item, which is a secondary singular[6], an invalid reflex. The 'd' occurs in valid reflexes in S.41 and S.42 only when preceded by a homorganic nasal.

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5. ø = zero
6. CpB 62.76 (11/10)

Compare

S.41 isilèvù (7/8) 'chin' < *CB-dèdù (7/8)

with

S.41 iindèvù (10) 'beard' < *dèdù (9/10)

Here 'd' occurs before homorganic nasal 'n' but in the following example, in order to form a singular from the example above there is,

S.41 udèvù (11) 'hair of beard' d ∠ resulting from back-formation.

Therefore here 'udèvù' may be considered secondary singular and cannot be regarded as a direct reflex.

Thus:-

*SB or *CB	Direct Reflex	Back-formation
-dàbà (10)	S.41 iindàbà (10) 'news'	udàbà (11) 'report, message'
(*SB)	S.42 iindàbà (10)	udàbà (11) 'serious affair'
-dûnà (9/10)	S.41 indûnà (9/10) 'male'	idûnà (5/6) 'male animal, beast'
(*SB)	S.42 indûnà (9/10)	indûnà
-dèndà (10) (*CB)	S.42 izindèndà (10a) 'sticky saliva'	udèndà (11) 'singular'
-dèdù (10) (*CB)	S.41 iindèvù (10) 'beard'	udèvù (11) 'hair of beard'

5.1.5 Dialectal Contamination

Dialectal contamination is a term which is used when, instead of the regular sound occurring in a reflex in a given language, a sound occurs which corresponds to a regular reflex in another dialect. This leads to the possibility of a hypothesis that the unacceptable sound in the one language has arisen through contamination from a neighbouring dialect. This particular hypothesis is what is involved in the term dialectal contamination. The high incidence of some of the extraneous consonants can be accounted for through dialectal contamination.

Although there have been attempts to classify the various languages and dialects of the S.10 group for a long time, a clear cut distinction between certain of the languages has been extremely difficult to differentiate. This was noted for example by Hazel Carter in Soko Risina Musoro[7], "The author (of this 'epic verse'), by birth a Manyika, writes and speaks a mixture of this and the Zezuru dialect and the piece is thus an interesting example of the kind of dialectal contamination which is widespread

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7. by H.W. Chitepo. See Bibl. no. 9

at the present day. It is in fact now extremely difficult to find a pure dialect speaker". This is most marked between S.12, S.13 and S.14, the Central dialects[8], and since two of these are among the languages under investigation there are inevitably a fair number of examples of this phenomenon.

This could therefore explain the high frequency of the occurrence of extraneous 'g' and extraneous 'ʃ' in radicals in S.13 and S.12, because in S.14 g(a) < *g(a) and *y(a) and S.14 ʃ(a) < *yi̯t(a) and *ci̯(a)

e.g.

*g(a) > S.13 and S.12 Ø(a)

*SB-gàmuked- 'receive'

S.14 -gàmut ʃir-

S.13 -gàmut ʃir- g ∉

S.12 -gàmut ʃir- g ∉

*y(a) > S.13 and S.12 Øa

*CB -yòki̯- 'roast'

S.14 -gᵒtʃ-

S.13 -gòt ʃ- g ∉

S.12 -gòt ʃ- g ∉

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8. See University College of Rhodesia. Bibl. no. 38

*cį(a) > S.13 and S.12 s(a)

S.14 -ʃȯr-

S.13 -ʃȯr- ʃ ∉

S.12 -ʃȯr- ʃ ∉

5.2 Wholly Foreign Material

It has been mentioned in Chapter 4 above that certain sounds occur as valid reflexes in a language in particular contexts only, but the door is then open for these sounds to be incorporated into other items, where they would then be considered extraneous, However, further sounds are wholly inadmissible as valid reflexes of CB to a language in any context, but afterwards, through constant use in the receptor language, these wholly extraneous sounds become incorporated into its phonemic structure[9]. They may even in some cases occur in place of sounds which would result through regular sound-shifting.

5.2.1 Click Consonants

For example the click consonants, speech sounds which occur in S.41 and S.42 and in a far more restricted sense

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9. See E.O.J. Westphal, Bibl. no. 41

in S.33, while being by definition wholly extraneous, in that they do not occur as a reflex of any starred CB consonant, have become incorporated into the phonetic structure of S.41 and S.42 and in certain cases even occur in place of regular reflexes. Although many of the click sounds are identical with those that occur in Bushman and Hottentot, the presumed source languages, the striking thing is that, as is shown in the following table, 5.2.2, the phonemic range of the clicks in S.41 and S.42 is the same as the other consonants. No voiced correlate of any click is known to occur in Bushman[10] and the nasalised varities do not correspond to those in S.41 and S.42[11].

It will be useful at this stage to look at the three languages that contain clicks, i.e. S.41, S.42 and S.33. Since the click consonants are by definition inadmissible as a valid reflex to a Bantu language, (in that they have an entirely different articulation from reflexes of consonants in direct cognates) they may thus be considered wholly extraneous.

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10. See Beach Bibl. no. 1
11. See Snyman & Beach. Bibl. nos 35 and 1.

5.2.2 Description of Clicks

There are three basic clicks in S.41 and S.42,

1) the dental click, indicated by the symbol ǂ (I.P.A.)
2) the palato-alveolar click, indicated by the symbol ! (Doke)[12]
3) the lateral click, indicated by the symbol ǁ (I.P.A.)

The clicks in S.41 and S.42 have become subjected to the same phonetic processes which other valid consonants in the language undergo, i.e.[13]

Consonant		Click
p	a) Simple	ǂ, !, ǁ
ph	b) Aspirated	ǂh, !h, ǁh
mp	c) Nasal	nǂ, n!, nǁ
mp	d) Nasal + Unvoiced	nkǂ, nk!, nkǁ
nyh	e) Nasal + Aspiration	nǂh, n!h, nǁh
bh	f) Voiced + Breathy	gǂ, g!, gǁ
mb	g) Nasal + Voiced	ngǂ, ng!, ngǁ

It appears that in modern S.41 (e) and (g) in the clicks have fallen together to (g) and in S.42 there is no (e) in the clicks at all.

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12. I have used the symbol ! Krönlein's system for this click instead of the I.P.A. symbol [ʗ] to avoid confusion with brackets in my own transcription.
13. See A.N. Tucker. Bibl. no. 37a

S.33 has only the palato-alveolar click with the aspirated and nasal varities (a), (b) and (c), the nasal variety (c) being slightly retroflex. These clicks are phonetically slightly different from the S.41 and S.42 clicks. In addition certain cognates which have a click in S.33, do not have one in S.41 or S.42, e.g. S.33 -!àmatʃhél- 'adhere to' Compare S.41 and S.42 -nàmathél- 'adhere to'. According to Doke there seems to be a marked influence from the S.40s, but these borrowings were probably adapted to a system already in S.33[14].

5.2.3 Proportion of Vocabulary containing Clicks

S.41 has a massive amount of click material in its vocabulary, in fact, in a dictionary of 4269 items, 1633 of these items contain one or more click, with is 38.2% of the total number of items. While in an S.42 dictionary of 23,510 items, 5411 of these contain one or more click, which is 23% of the total[15]. S.33 on the other hand has

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14. See Doke: Bibl. no. 12a 'The Suto nasal click ..., is the nasal form of the genuine retroflex click, the of the !hǖ: Bushman click, a foreign click to Zulu' S.42 and S.41.
15. The items with more than one click in S.41 are 190, which is 11.6% of the total vocabulary and in S.42 there are 570 items with more than one click which is 10.5% of the total vocabulary, and these figures correlate with the percentage of items with clicks, 11.6% being a factor of 2.8, and 10.5% being a factor of 2.2.

a minimal amount of click material. The most plausible theory for this fact may be that the language with the larger range of clicks i.e. S.41, has undergone the most perturbation from outside. This seems to correlate with the fact that S.41 has the greatest number of extraneous sounds as well, even excluding the click consonants.[16]

In certain instances the click sound in S.41 and S.42 occurs in place of certain regular sounds in the original CB reflex.

e.g.

	*-dĩm- 'become extinguished'			
S.41	-ǂĩm-	* → -lĩm-	ǂ	∉
S.42	-ǂĩm-	* → -lĩm-	ǂ	∉
	*-tɓ́ɓd- 'pick up'			
S.41	-ǂhɓ́l-	* → -thɓ́l-	ǂh	∉
S.42	-thɓ́l-			
	*-bʃn- 'sing, dance'			
S.41	-ʖhĩn-	* → -bĩn-	ʖh	∉
S.42	-sĩn-		skewed	
	*bɑ́ĩd- 'tell'			
S.41	-ʖél-	* → tʃhél-	ʖ	∉
S.42	-tʃhél-			

16. See 5.1.1 above

No distinct pattern of regular replacement has been noted. Note also 5.3.1 (vii).

5.3.1 Extraneous Common Features

The lists of potential cognates between the seven languages contains cases where at least one or more of the items is extraneous. Where these extraneous sounds have a common phonetic feature they can be abstracted and arranged in clusters of similar patterning.

i) There are many items displaying the correspondence of similar patterning of ∉ consonants of:

∉ g_1 in S.21

with ∉ g_1 in S.13, S.12, S.41, and S.42

and k_1 in S.33 and S.31[17]

e.g.

S.21 mugòdí (3/4) g ∉ , d ∉ 'hole, mineshaft'

S.13 mugòdì (3/4) g ∉ , d ∉

S.12 mugòdì (3/4) g ∉ , d ∉

S.33 mọkòtì (3/4)

S.41 umgòdí (3/4) g ∉ , d ∉

S.42 umgòdí (4/4) g ∉ , d ∉

In this example, extraneous 'g' and 'd' occur in all of the languages apart from S.33 and as has already

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17. See 4.5.1

been stated, there is a tendency to devoice in this language, hence this item may be considered (but only in the context of the five other items, for mokòtì < *-ngòndì which by itself is not improbable) extraneous with the rest. In this and the following example it seems impossible to discover the probable origin:-

S.21 tʃhigídí (7/8) g ∠ , d ∠ skewed tone 'a thousand'

S.33 sekètè (7/8)

S.41 isigìdì (7/8) g ∠, d ∠ '10,000, million'

S.42 isigìdì (7/8) g ∠, d ∠

However the following example could be associated with Afrikaans skêr 'scissors', but there is a radical in the S.10 languages -gèr- 'to cut', and, while the tone is different from that of the nominal, it is being found that through apparent analogy with this radical, the nominal appears to have a low tone.

e.g.

S.21 tʃhigéró (7/8) g ∠ 'scissors'

S.13 tʃigéró (7/8) g ∠

S.12 tʃigèrò (7/8) g ∠

S.33 sẹkêrè (7/8)

S.31 sẹkêrè (7/8)

S.41 isikélè (7/8) k, ∉

S.42 isikélè (7/8) k, ∉

ii) There is a noticeable correspondence between radicals which have ∉ sounds in:

S.21 ph_1, th_1, kh_1

with regular homophonous sounds in

S.41 and S.42 ph_1, th_1, kh_1 $*p_1$, $*t_1$, $*k_1$

e.g.

a) S.21 -phákhamis- (ph_1 ∉) 'lift'

S.41 -phakámis-

S.42 -phakámis-

b) S.21 -thí- (th_1 ∉) 'trap, catch fish'

S.41 -thíy-

S.42 -thíy-

c) S.21 -kháthal- (kh_1 ∉) 'weary of, concerned'

S.41 -khathál-

S.42 -khathál-

The effect of a nasal in C_1 and hence in C_2 (Sequence Rule) in S.21, cannot be ruled out although this is doubtful in a radical, see 4.3.1. However, the relationship with, and possible loan from the S.40 languages, is a valid alternative for the presence of these sounds in S.21.

iii) There is an exceedingly high correspondence of items in common of correspondence in radicals between

$\not\in p'_1$ in S.21

with S.13 and S.22 $p_1 < *p_1$

and S.21 $k'_1 \not\in$

with S.13 and S.12 $k_1 < *k_1$

and a lower incidence of

S.21 $t'_1 \not\in$

with S.13 and S.12 $t_1 < *t_1$

The correlation between these items has been mentioned in 4.2.1 above where these ejectives occur in S.21 after secondary prefixes.

e.g.

a) S.21 -pèt- $p'_1 \not\in$ 'fold, hem'

S.13 -pèt-

S.12 -pèt-

b) S.21 -kát- k'_1 ∠ 'coil'

S.13 -kát-

S.12 -kát-

c) S.21 -tènd- t'_1 ∠ 'approve'

S.13 -tènd-

S.12 -tènd-

iv) There are also a number of other cases which are difficult to classify. The following provide examples of some of the more common

S.21 $nʒ_2$ ∠

with

S.13 $ndʒ_2$ ∠

S.12 $ndʒ_2$ ∠

S.41 nz < *nji

S.42 nz < *nji

e.g.

a) S.21 mulènzè (3/4) ($nʒ$ ∠) 'leg'

S.41 umlènzè (3/4)

S.42 umlènzè (3/4)

b) S.21 dènzè (5/6) ($nʒ$ ∠) 'torch'

S.13 mɲèndzè (3/4) ($ndʒ$ ∠)

S.12 mɲèndzè (3/4) ($ndʒ$ ∠)

c) S.21 mbànʒé (9/10) (nʒ ∉) 'hemp'

S.13 mɲàndʒé (9/10) (ndʒ ∉)

S.12 mɲàndʒé (9/10) (ndʒ ∉)

The possible origin of this item is discussed below in 5.4.1.

v) In a few items correspondence is shown between ∉ b in S.21, S.13, S.12, S.41 and S.42

and b in S.33 and S.31 < *b

e.g.

a) S.13 -bùy- b ∉ 'converse'

S.12 -bùy- b ∉

S.33 -bù-

S.31 -bù-

There is a discrepancy in tone between the two groups of languages in the above example.

b) S.33 -bàll- 'impute'

S.31 -bàlel-

S.41 -bàlel- (b ∉)

However, this correspondence is fragmentary and ∉ b in most instances agrees with the words of wholly foreign origin i.e. Afrikaans or English.

vi) Sometimes there is an apparent correspondence between; unvoiced pre-palatal affricates

e.g.

a) S.21 tʃhéfu (7/8) 'poison' (Afrikaans gif[18])
S.13 tʃépfu (7/8)
S.12 tʃépfu (7/8)
S.33 tʃéfù (7/8)

but

S.41 ʊɛhéfù (11) (ɛh ≠)

b) and voiced pre-palatal affricates

S.21 ʤási (5/6) (ʤ ≠) 'overcoat' (Afrikaans jas[19])
S.13 ʤási (5/6) (ʤ ≠)
S.12 ʤási (5/6) (ʤ ≠)
S.33 ʤâsè (9/10)
S.42 iʤási (5/6)

but

S.41 iɟási (5/6) (ɟ ≠)

When it comes to click consonants there seems to be no regular correspondence between the clicks from the point of view of articulation.

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18. pronounced [xəf]
19. pronounced [yas]

vii) S.33 single click consonant correlates with all three click consonants and consonant combinations of S.41 and S.42 S.41 and S.42 do not always have click consonant correlates. e.g.

a)	S.33	mǫ!hɔ̀!hɔ̀!hɔ̀	(3/4)	(!h	≠) 'larynx'
	S.41	u!hɔ̀!hɔ̀!hɔ̀	(11/10)	(!h	≠)
b)	S.33	le!ɓbà	(5/6)	(!	≠) 'tobacco'
	S.41	iɬúɓà	(5/6)	(ɬ	≠)
c)	S.33	le!hékù	(5/6)	(!h	≠) 'old man'
	S.41	iʒhégò	(5/6)	(ʒh	≠)
	S.42	iʒhégù	(5/6)	(ʒh	≠)

and

	S.41	um!ámelo	(3/4)	(!	≠) 'pillow'
	S.42	isiɬámelo	(7/8)	(ɬ	≠)

This seems to indicate that between the S.40 languages there is not a strict correspondence in click consonants and in many cases they are free variants.

5.4.1 Origins

In an area where there is practically no documentation of earlier states of language, there is the possibility that the sound that is extraneous in today's languages,

might have occurred in a direct reflex in some language or dialect of an earlier epoch of which there now remains no trace. One result of this is that no reasonable guess can be made about the origin of many of the extraneous sounds.

5.6 Summary and Conclusions

A complete list of extraneous consonants which would be considered extraneous in any position has been given for each language. There is a higher probability of C_2 being extraneous when C_1 is extraneous. This seems to be a feature of extraneous consonants.

Certain consonants which are wholly extraneous, have alternatives which may be used in free variation, such as S.33 alternating de/te, da/ta, do/to. In contrast with extraneous consonants in free variation, there are certain consonants which have been classified as extraneous although they could be reflexes of a starred form. These have been cited as extraneous because they are not statistically as frequent as the consonants which are considered valid reflexes. Where the disparity has not been great, these consonants have been placed with the valid consonant reflexes in Chapter 3.

Back-formation, a process whereby a starred form in the plural in Class 10 is subsequently formed into a singular and the nasal is dropped, produces sounds which must be considered extraneous. This process applies to S.41 and S.42, where the regular reflex of homorganic nasal + consonant, e.g. nd, becomes consonant only e.g. 'd'.

Certain consonants which are considered to be wholly extraneous may be a result of dialectal contamination. Various sounds may occur in S.13 and S.12 and be considered extraneous, but these sounds may be regular reflexes of starred consonants in other dialects of the S.10 group. This characteristic, which is a particular feature of the S.10 languages, may also account for certain extraneous sounds in other languages.

The click consonants are speech sounds apparently adopted from the Bushman and Hottentot languages and which occur in S.41 and S.42 and to a lesser extent in S.33. They have become incorporated into the phonemic structures of these languages, in some cases even replacing sounds which would occur through regular sound-shifting. These click consonants are important as they may indicate the

relative amount of intrusive material that might be expected in these languages. They have been described in this chapter and the approximate percentage of the clicks occurring in S.41 and S.42 has been assessed. S.41 has a higher percentage of click material than S.42, which is in keeping with the fact that S.41 has the greatest number of extraneous sounds excluding the click consonants.

Features common to more than one language and which are extraneous in at least one of the languages, have been collated and compared and correspondences have been set up, which in certain cases may provide a possible source for the extraneous sounds, e.g. S.21 ≠ p̀, t̀, k̀, appear to correlate with regular reflex p, t, k, in the S.10 languages and similarly ph, th, kh, in S.21 appears to correlate with regular reflex ph, th, kh in the S.40 languages. The correlations for the click consonants is not consistent in the S.40 languages.

Having discussed various aspects of direct as opposed to indirect cognates, computations comparing these items will be made in the following chapter.

Addendum A.5. Items referring to alien objects.

A wholly different problem is posed by the existence of sets of words which, although they contain no extraneous sounds, nevertheless refer to a patently alien object.

A.5.1

These are classified as, those that have nothing other to identify them as being extraneous than the article to which they refer ie. names of imported or non-indigenous objects.

e.g.

S.21 mbòŋgòlà (9/10) 'donkey'

S.13 mbòŋgóró (9/10)

S.12 mbòŋgóró (9/10)

S.33 pɔ́kɔ̀là (9/10) 'mule, freight animal'

S.41 imbóŋgòlò (9/10) 'mule, wild ass'

S.42 imbóŋgòlò (9/10) 'donkey, ass, mule'

The word for 'donkey', while having an air of being indigenous, because of the regular sound-shifting, apart from the final vowel, which alternates between -o and -a, could possibly have been adopted into the languages when the animal was introduced into southern Africa, or this could be an extension of meaning of an indigenous word. There is

also a discrepancy in meaning within the zone, although these meanings are related, but the fact that S.42 includes all discrepancies adds weight to their relationship. However, all attempts to discover a possible origin have failed.

Similarly with the word for 'small-pox'

S.21 thòmbà (9) 'small-pox'

S.13 nɦòmbá (9)

S.12 nɦòmbá (9)

A.5.2

Those that can be identified as extraneous, though the word for the article that describes them can then be traced to a probable source language.

e.g.

S.21 khànzú (9/10) 'dress, garment'

S.13 ɦànzú (9/10) 'shirt, long garment'

S.12 ɦànzú (9/10) 'shirt, long garment'

Possible loan Swahili kanzu 'shirt' originally from Arabic ǧamṣu.

There are other examples of possible Swahili loans, such as the word for 'money' (originally from Arabic māl)[20]

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20. Confirmed by Dr. Jan Knappert.

S.21 malí

S.13 marí

S.12 marí

S.33 madí

S.31 madí

S.41 imáli

S.42 imálì

whereas,

S.21 ɖómú (9/10) 'bridle'

S.13 tómò (5/6)

S.12 tómò (5/6)

S.33 tômò (9/10)

S.31 tômò (9/10)

S.42 itómù (5/6) t' ɬ

These cognates are of possible Afrikaans origin from the word toom meaning bridle, while the following example,

S.21 mbànʒé (9/10) 'hemp' nʒ ɬ

S.13 mbàndʒé (9/10)

S.12 mbàndʒé (9/10)

is very likely from the Arabic word bhaŋ meaning 'hemp', or Hindi mbanja.

Conclusions to Addendum

Possible origins for extraneous items have been discussed and classified according to

a) those which appear to be regular reflexes, but the articles to which they refer are non-indigenous and the origin is unknown, and

b) those items whose possible source can be traced. The origins are varied and the system of borrowing has not been discussed here. Where there is a regular sound shift of consonants with patently non-indigenous items, the hypotheis that the shift took place after the introduction of the article could be postulated. This phenomenon could also just be an extension of meaning of an indigenous word, or, where the original article has disappeared the word could have been adapted for use in the naming of the new articles.

Chapter 6

"Computations comparing Direct with Indirect Cognates"

Chapter 6

"Computations Comparing Direct with Indirect Cognates"

6.0 Introduction

With the direct cognates having been dealt with in Chapter 3, the partially extraneous material identified in Chapter 4, and finally the wholly extraneous material of Chapter 5, it is necessary now to quantify this material in order to be able to compare the direct with the indirect cognates. When the *SB cognates were collated, it was noticed that certain of the cognates, while appearing to be connected to the starred form, had some feature which prevented them from being classified as direct cognates. They have thus been classified as indirect cognates containing features causing them to be skewed in shape or meaning or both. In detecting the type of *SB item (see 3.2.3 above) three sets of lists have been drawn up each comparing S.21 with two languages in a group. In order to obtain some more precise quantification of this material, calculations to set up percentages have been made.

6.1 Method

Initially, the total number of *SB cognates in S.21 (TCs) arrived at in this study are determined and expressed

as a total percentage. This of necessity includes those cases where no starred form has actually been set up. Each language in turn is then compared with S.21 with regard to:-

i) their total number of cognates in common (TCCs)

ii) the TCCs as a percentage of the total number of reflexes in S.21 (TCs)

iii) the direct cognates (DCs) between S.21 and the language with which it is compared, as opposed to the

iv) indirect cognates (ICs), which in turn will be split up into,

v) those 'skewed in shape' (SS) and

vi) those with 'skewed meaning' (SM) and

vii) those with both 'skewed shape and skewed meaning' (SSM)

viii) and these in turn are expressed as percentages of the TCCs and the TCs.

6.2 Calculations

Each calculation is made separately for radicals and stems. Radicals are abstractions from whole sets of verbal words in different tenses, whereas stems are actual abstractions of a different kind in that they only need class prefixes to be full items. One result of this difference is that many more alien stems appear to be accepted into a

language than alien radicals.[1] This is not the reason why it was decided to handle radicals and stems separately, it was simply for much greater convenience in managing the multiplicity of the data.

The total number of reflexes in S.21: a) Stems: 302 TCs
b) Radicals: 214 TCs

6.2.1 S.21 with S.13

a) Stems.

(i) TCCs	126	i.e.	(ii)	41.7%	
(iii) DCs	58	i.e.	(viii)	46%	(19.2% of TCCs)
(iv) ICs	68	i.e.	"	54%	(22.5% of TCCs)
(v) SS	54	i.e.	"	79.4%	(17.8% of TCCs)
(vi) SM	4	i.e.	"	5.9%	(1.4% of TCCs)
(vii) SSM	10	i.e.	"	14.7%	(3.3% of TCCs)

In order to illustrate visually the hierarchical relationships between these percentages, a flow chart has been developed for

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1. No actual studies of this kind have so far been published, but some investigations have been undertaken and the results communicated to me verbally.

these two languages. For example, taking one of the most complex of these relationships, that relating those cognates with both 'skewed meaning and skewed shape', i.e. SSM, as a percentage of the TCs, the relationship in the hierarchy can be traced back, firstly to the ICs, then through its percentage of cognates in common, TCCs, back to the TCs. This has not been repeated for other pairs of languages, since the only purpose in giving it is to present the figures in an easier visual form.

FLOW CHART : S21 WITH S13

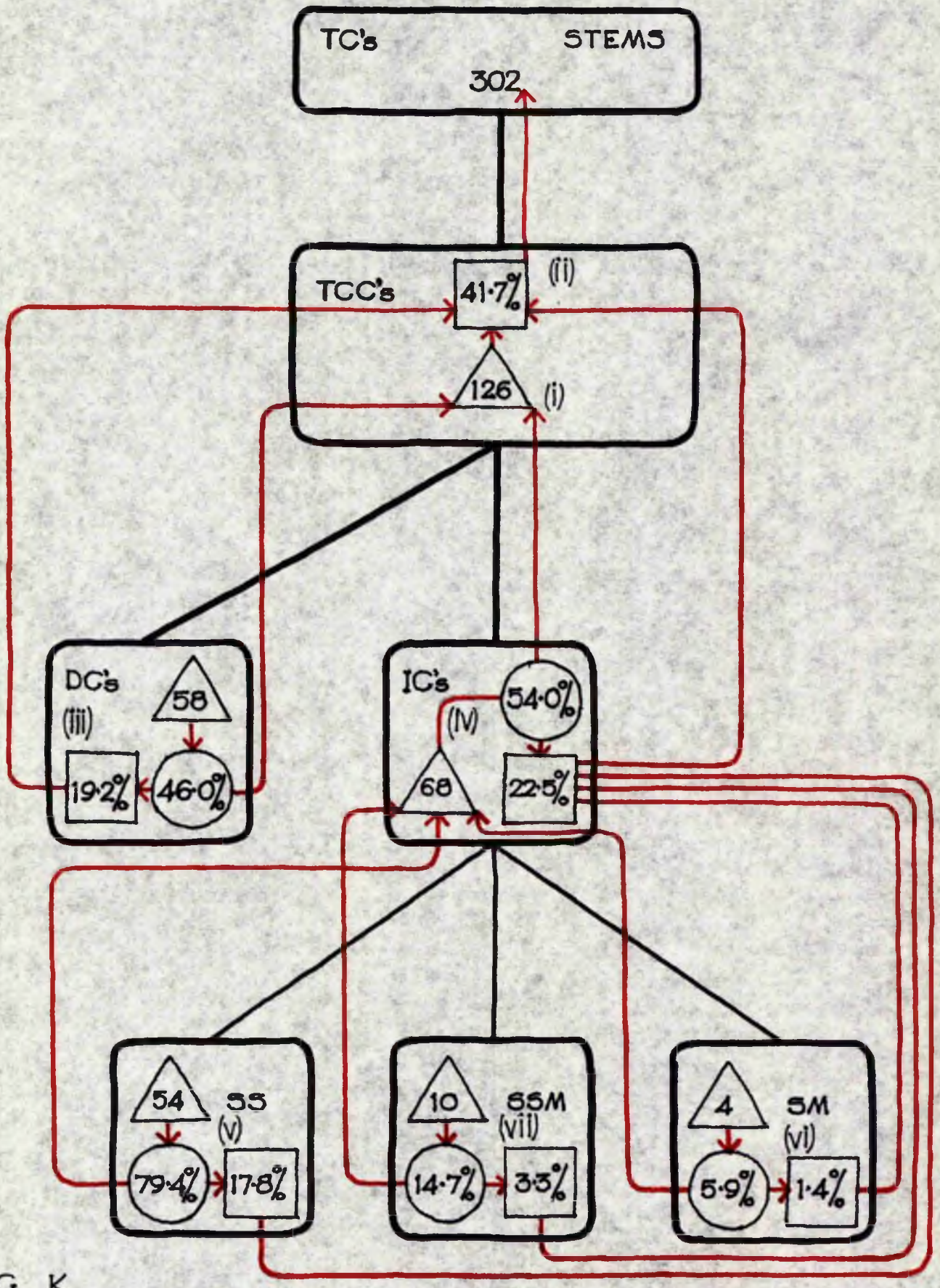


FIG. K

Similarly the figures and percentages for the radicals (b) can be traced on the flow chart above.

b) Radicals

TCCs	133	i.e.	62%	
DCs	39	i.e.	29.3%	(18% of TCCs)
ICs	94	i.e.	70.7%	(44% of TCCs)
SS	85	i.e.	90.5%	(39.7% of TCCs)
SM	4	i.e.	4.25%	(1.9% of TCCs)
SSM	5	i.e.	5.25%	(2.4% of TCCs)

From these two sets of figures the following observations can be made:-

The total percentage of cognates which S.21 and S.13 have in common is much higher in the radicals than in the stems. While the difference between the percentage of direct as opposed to indirect cognates in the stems is not marked, there is a decided discrepancy in the percentage of these two in the radicals, where 44% of the total cognates in common are indirect. However, this occurs even though there are more radicals in common and of these, there are far less direct cognates.

6.2.2 S.21 with S.12

a) Stems

TCCs	124	i.e.	41%	
DCs	58	i.e.	46.75%	(19.2% of TCCs)
ICs	66	i.e.	53.25%	(21.8% of TCCs)
SS	58	i.e.	88%	(19.2% of TCCs)
SM	3	i.e.	4.5%	(.9% of TCCs)
SSM	5	i.e.	7.5%	(1.7% of TCCs)

b) Radicals

TCCs	122	i.e.	57%	
DCs	36	i.e.	29.5%	(16.8% of TCCs)
ICs	86	i.e.	70.5%	(40.2% of TCCs)
SS	77	i.e.	89.5%	(36% of TCCs)
SM	3	i.e.	3.5%	(2.8% of TCCs)
SSM	6	i.e.	7%	(1.2% of TCCs)

The following observations are made:-

The difference between the DCs and the ICs in the stems is less than that in S.13, however, in the radicals it is the same as S.13. The major difference between the two languages is that S.12 has a greater percentage of indirect cognates with 'skewed meaning' and with 'skewed meaning and skewed shape' in the radicals as opposed to the stems. However, these figures are so low in comparison with the indirect

cognates with 'skewed shape' only that while being comparable, they cannot be of any great significance.

6.2.3 S.21 with S.33

a) Stems

TCCs	157	i.e.	52%	
DCs	73	i.e.	46.5%	(24.2% of TCCs)
ICs	84	i.e.	53.5%	(27.8% of TCCs)
SS	75	i.e.	89.3%	(24.8% of TCCs)
SM	5	i.e.	5.9%	(1.7% of TCCs)
SSM	4	i.e.	4.8%	(1.3% of TCCs)

b) Radicals

TTCs	95	i.e.	44.4%	
DCs	47	i.e.	49.5%	(21.9% of TCCs)
ICs	48	i.e.	50.5%	(22.4% of TCCs)
SS	47	i.e.	97.2%	(21.75% of TCCs)
SM	0	i.e.		
SSM	1	i.e.	2.8%	(.65% of TCCs)

As compared with the S.10 languages, S.33 has a higher percentage of TCCs in the stems, but this is not in proportion to the number of DCs, as it is the radicals with a lower percentage of TCCs that has the higher percentage of direct cognates. The difference between the direct as opposed to the indirect cognates is slight, but in each

case there are more indirect cognates. There is only a minimal amount of cognates 'skewed in meaning' and with 'skewed shape and skewed meaning' in the radicals.

6.2.4 S.21 with S.31

a) Stems

TCCs	135	i.e.	44.6%	
DCs	76	i.e.	56.25%	(25.1% of TCCs)
ICs	59	i.e.	43.75%	(19.5% of TCCs)
SS	52	i.e.	88.1%	(17.2% of TCCs)
SM	4	i.e.	6.7%	(1.4% of TCCs)
SSM	3	i.e.	5.2%	(.9% of TCCs)

b) Radicals

TCCs	83	i.e.	38.75%	
DCs	45	i.e.	54.25%	(21% of TCCs)
ICs	38	i.e.	45.75%	(17.75% of TCCs)
SS	36	i.e.	94.8%	(16.8% of TCCs)
SM	2	i.e.	5.2%	(.95% of TCCs)
SSM	0			

The percentage of cognates in common is lower in S.31 than in S.33, but an important observation to be made here is that in both radicals and stems, there is higher percentage of direct as opposed to indirect cognates. (Compare observations in 6.2.1, 6.2.2 and 6.2.3 above.)

The percentages of cognates with 'skewed meaning' and those with 'skewed meaning and skewed shape' is fractional in this language as well.

6.2.5 S.21 with S.41

a) Stems

TCCs	102	i.e.	33.8%	
DCs	32	i.e.	31.4%	(10.6% of TCCs)
ICs	70	i.e.	68.6%	(23.2% of TCCs)
SS	54	i.e.	77%	(17.8% of TCCs)
SM	6	i.e.	8.6%	(2% of TCCs)
SSM	10	i.e.	14.4%	(3.4% of TCCs)

b) Radicals

TCCs	81	i.e.	37.8%	
DCs	17	i.e.	21%	(7.9% of TCCs)
ICs	64	i.e.	79%	(29.8% of TCCs)
SS	58	i.e.	90.7%	(27.1% of TCCs)
SM	2	i.e.	3.1%	(.9% of TCCs)
SSM	4	i.e.	6.2%	(1.8% of TCCs)

S.41 has the lowest percentage of cognates in common with S.21 of all the languages under discussion, and also the lowest percentage proportionally of direct cognates in common with S.21, almost three times as many indirect cognates as opposed to direct cognates.

6.2.6 S.21 with S.42

a) Stems

TCCs	103	i.e.	34.2%	
DCs	37	i.e.	36%	(12.4% of TCCs)
ICs	66	i.e.	64%	(21.8% of TCCs)
SS	53	i.e.	80.3%	(17.6% of TCCs)
SM	4	i.e.	6.1%	(1.3% of TCCs)
SSM	9	i.e.	13.6%	(2.9% of TCCs)

b) Radicals

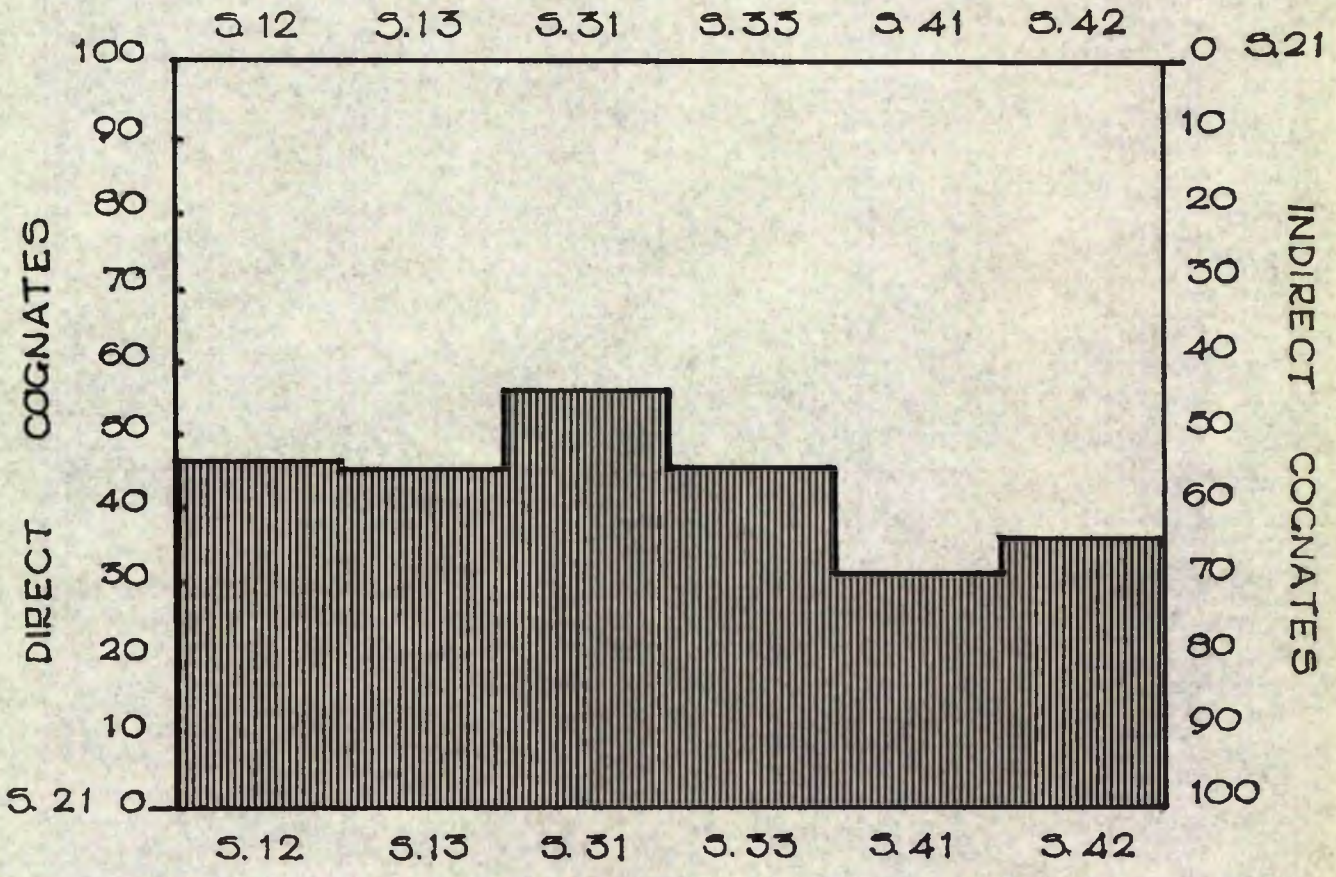
TCCs	88	i.e.	41%	
DCs	23	i.e.	26.1%	(10.8% of TCCs)
ICs	65	i.e.	73.9%	(30.2% of TCCs)
SS	58	i.e.	89.3%	(27% of TCCs)
SM	3	i.e.	4.6%	(1.4% of TCCs)
SSM	4	i.e.	6.1%	(1.8% of TCCs)

S.42 has more radicals in common with S.21 than it has stems in common, but there are more stems as direct cognates associated with S.21. As compared with S.41, in both radicals and stems, there is almost exactly the same percentage of cognates with 'skewed shape' only. The percentages of cognates with 'skewed meaning' and cognates with 'skewed meaning and skewed shape' is higher in general in these languages than those in the other languages described.

6.3 Calculations on Histograms

Taking all the figures into account, arrived at in the above calculations, histograms are drawn to show visually the relationship of each language compared with S.21. This is done with regard to (i) direct as opposed to indirect cognates and (ii) with regard to the components of the indirect cognates i.e. those cognates with 'skewed shape' only, and those with 'skewed meaning' only and also those with both 'skewed shape and skewed meaning'. (i) and (ii) are classified according to (a) stems and (b) radicals. The profiles of the histograms indicate six of the languages under discussion related to S.21. The spaces between the languages on the horizontal base line are equidistant, as their relationship to each other is not being dealt with in this exercise, but rather their relationship each to S.21, which is shown on the vertical scale 0-100 (0 being S.21).

6.3.1 Stems



(a.i) As Percentages of Cognates in Common

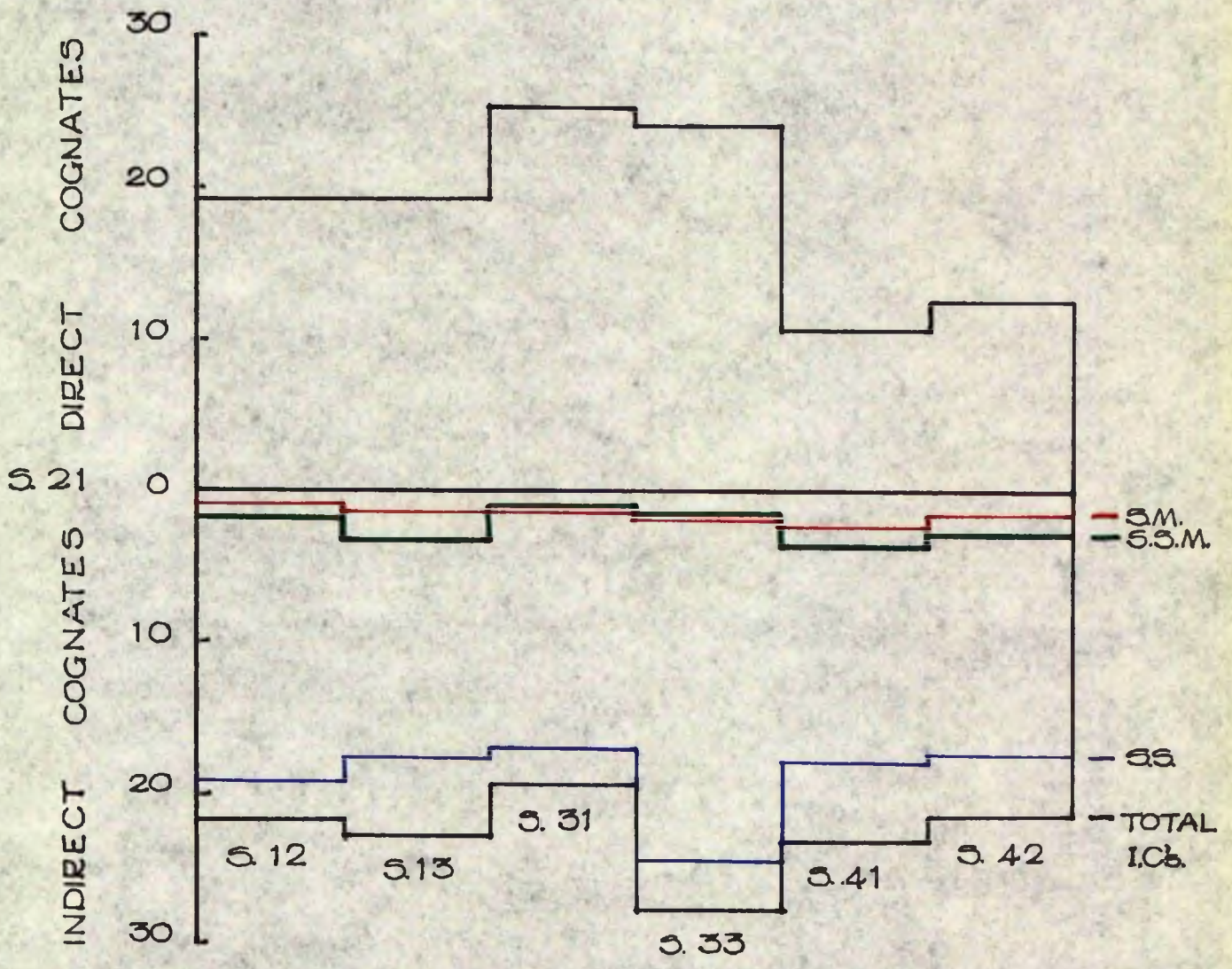
From the above histogram, it is apparent that S.13, S.12 and S.33 are broadly similar in their relationship to S.21 as to cognates in common, S.12 having marginally more direct cognates corresponding to S.21 than S.13 or S.33. However, S.31 has substantially more direct cognates in common with S.21 and proportionally fewer indirect cognates. S.41 on

the other hand, is shown to have the lowest percentage of direct cognates in common with S.21 and the highest percentage of indirect cognates.

Having considered the relationship of the languages to S.21 with respect to the direct as opposed to the indirect cognates, the components of the indirect cognates are plotted on a histogram and show up clearly in visual form the differences from language to language with regard to the skewed material.

6.3.2 Direct and Indirect Cognates as Percentages of TCs - Stems

(a.ii)

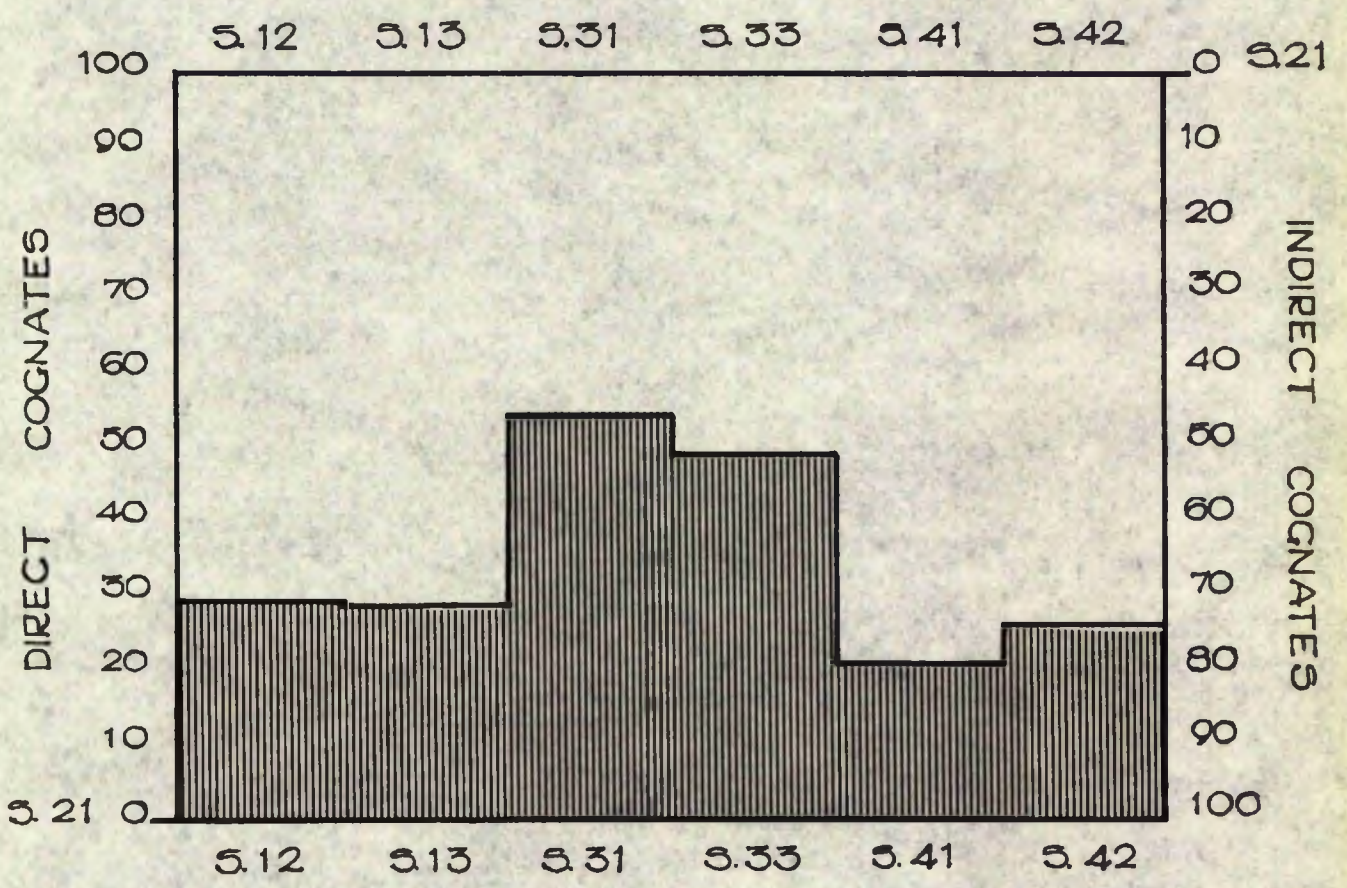


From the above histogram, it can be seen that S.33 has the greatest percentage of stems with skewed shape only, while S.31 has the lowest. However, S.31, with S.41 and S.42 and S.13 have relatively similar relationships with S.21 with regard to the percentages of 'skewed shape' only, and S.12 differs only slightly from the other languages. There is little variation in the percentages of indirect cognates with 'skewed meaning' and with 'skewed meaning and shape' in the stems in languages S.12, S.33 and S.31 and the difference between the two is not great in S.13, S.41 and S.42.

6.3.3 b) Radicals

In the histogram below (b.i), comparing the relationship of the languages to S.21 as to direct and indirect cognates in the radicals, the difference in relationship from group to group provides an entirely different pattern from (a.i) above comparing the relationship of the stems.

(b.i) Radicals



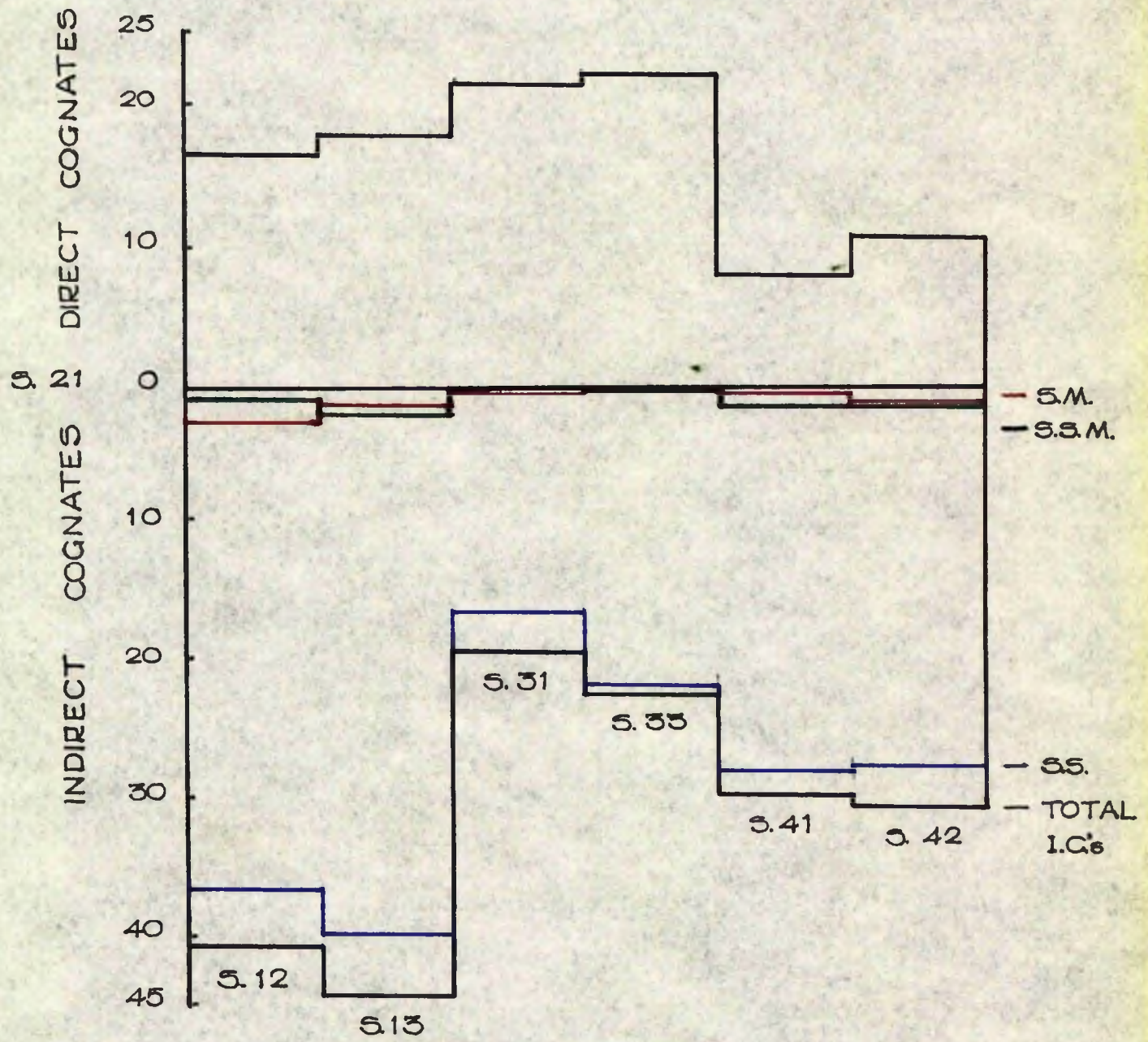
As Percentages of Cognates in Common

It can be seen that there is very little difference between S.13 and S.12 in their relationship to S.21, but S.33 and S.31 have decidedly more direct cognates in common with S.21, S.31 once again having the greatest percentage in common. The S.41 radicals as with the stems, have the lowest percentage of direct cognates and conversely the highest percentage of indirect cognates.

Similarly, with (b.ii) below, the difference in the relationship of the languages to S.21 in the stems as opposed to the radicals is accentuated when (b.ii) is compared with (a.ii).

6.3.4 Direct and Indirect Cognates as Percentages of TCs - Radicals.

(b.ii)



There is little variation in the percentages of radicals with 'skewed meaning' and 'skewed meaning and skewed shape', from language to language, and as has been stated earlier in this chapter, these percentages can be of minimal significance apart from showing up this slight variation. However, there is a marked difference with regard to radicals in common with 'skewed shape' only. As compared with a.ii above, it is S.13 which has the greatest percentage of radicals with skewed shape in relation to S.21. The variation in percentages from language group to language group is substantial, the greatest variation being between the S.10 languages and the S.30s.

An additional observation is that the profile of cognates with skewed shape follows that of the total indirect cognates in every case, with the exception of S.42 where the trend is reversed. The margins by which the skewed shape profiles themselves differ from the profiles of the total indirect cognates of each group, indicate that;

i) in the S.10s there is no difference

ii) in the S.40s there is a considerable difference

iii) in the S.30s the margin is minimal.

6.4 Ratios of reflexes (stems and radicals) of each language to S.21

As the disaggregated components of the cognates have now been considered in some detail above, it is necessary to review them in total. The following calculations and figures illustrate the average ratios by considering both stems and radicals inclusive of their direct and indirect cognates.

Total cognates: 302 stems + 214 radicals

= 516

The ratios, using S.21 with S.13 as an example, are determined as follows:

a) assemble TCCs

i.e. 126 stems + 133 radicals = 259

b) assemble DCs

i.e. 58 stems + 39 radicals = 97

c) express DCs as percentage of TCCs

i.e. $\frac{97}{259}$ = 37.5%

d) assemble ICs

i.e. 68 stems + 94 radicals = 162

e) express ICs as percentage of TCCs

i.e. $\frac{162}{259}$ = 62.5%

f) express ICs as proportion of DCs

i.e. $\frac{62.5}{37.5}$ = 1 : 1.7

Similarly:

S.21 with S.12

TCCs 124 + 122 = 246

DCs 58 + 36 = 94 = 38.5% of 246

ICs 66 + 86 = 152 = 61.5% of 246

Therefore proportion = 1 : 1.6

S.21 with S.33

TCCs 95 + 157 = 252

DCs 73 + 47 = 120 = 47.6% of 252

ICs 84 + 48 = 132 = 52.4% of 252

Therefore proportion = 1 : 1.1

S.21 with S.31

TCCs 135 + 83 = 218

DCs 76 + 45 = 121 = 55.5% of 218

ICs 59 + 38 = 97 = 44.5% of 218

Therefore proportion = 1 : 0.8

S.21 with S.41

TCCs 102 + 81 = 183

DCs 32 + 17 = 49 = 26.8% of 183

ICs 70 + 64 + 134 + 73.2% of 183

Therefore proportion = 1 : 2.7

S.21 with S.42

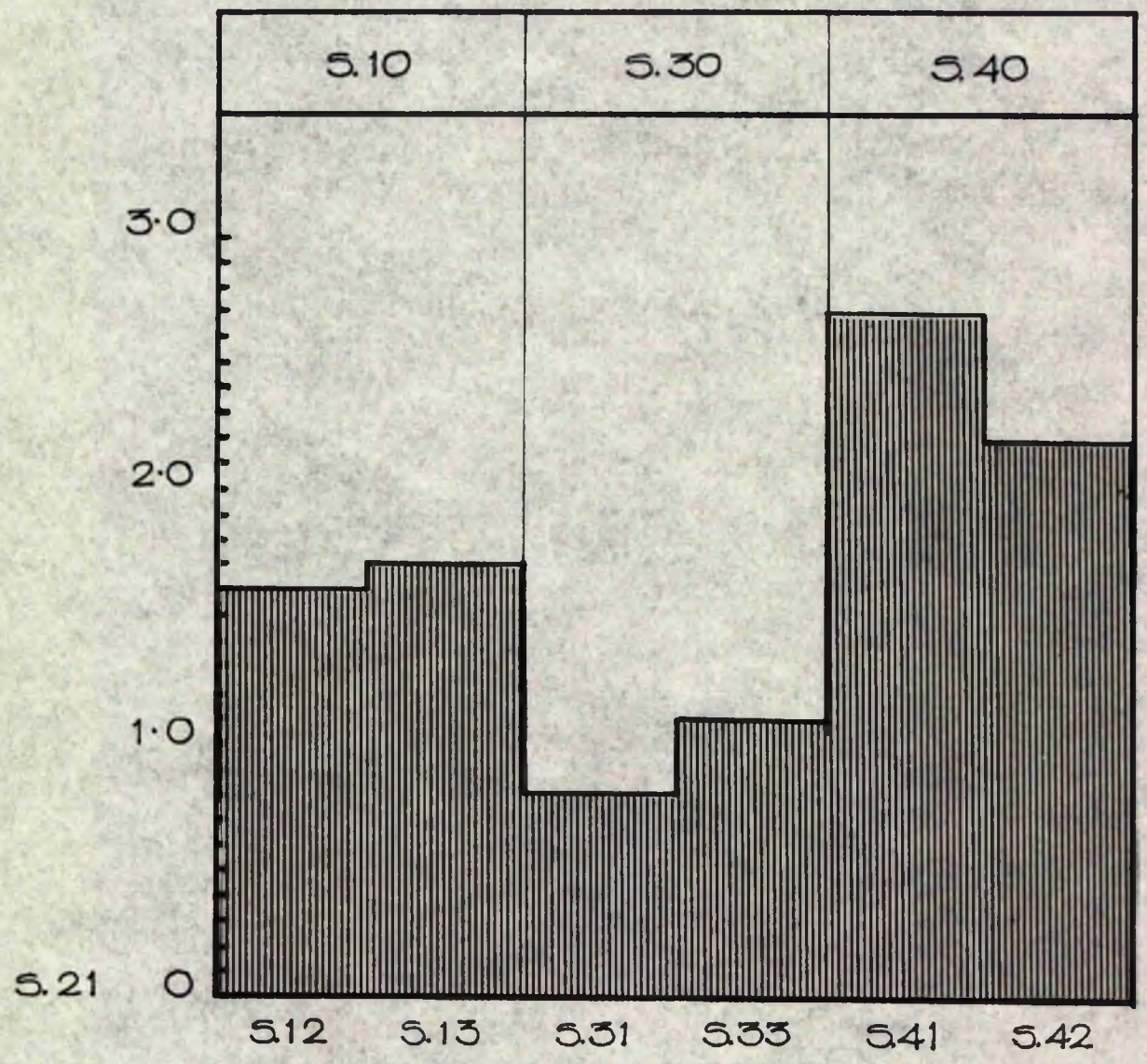
TCCs 103 + 88 = 191

DCs 37 + 23 = 60 = 31.4% of 191

ICs 66 + 65 = 131 = 68.6% of 191

Therefore proportion = 1 : 2.2

These ratios are plotted as a histogram to display diagrammatically their relationship to S.21



6.4.1 Observations on ratios

1) The difference in the ratios clusters according to the groups of languages i.e. S.10, S.30 and S.40.

2) S.13 and S.12 in group 10 are the least different from each other in their relationship to S.21.

3) S.41 and S.42 in group 40 display the greatest difference.from each other.

4) Of all the languages, S.41 displays the highest ratio as related to S.21 and S.31 the lowest.

5) Although the TCCs in S.33 are almost of the same order as those in the S.10s, yet the ratio is very much less in S.33.

6) In the S.10 group the percentage difference between the TCCs is 5% and the percentage difference between the ratios is 6%. In this instance the ratio almost reflects the percentage difference between the TCCs;

whereas,

in the S.40 group the percentage difference between the TCCs is 4% and the percentage difference between the ratios is 19%.

7) The difference between the ratios of groups S.30 and S.40 is 10% (i.e. 14% and 4%) and the percentage difference in TCCs is 8% (27% and 19%).

6.5 Conclusions

From these calculations it appears that the S.30 languageshave the most direct cognates in common with S.21 and therefore display a closer possible genealogical relationship to S.21. S.31 in particular has the highest percentage of direct cognates at the same time as having the lowest percentage of indirect material. The S.40 languages on the other hand have the greatest amount of indirect material but the smallest amount of direct material and may be considered to be the most distantly related from S.21 of all the languages under discussion.

The percentages of indirect cognates with 'skewed meaning' and those with 'skewed meaning and skewed shape' are small in comparison with those that have 'skewed shape' only. There is a sharp distinction from language to language of cognates with 'skewed shape'.

Intrusive material in general seems to contain more nominals than verbals. However, S.13 and S.12 have the greatest number of radicals with 'skewed shape' only. This seems to suggest that, while there is a link between S.21 and the S.10 languages, this link appears to be of a nature which indicates that there is a large amount of intrusive material in S.21 from the S.10s particularly in the radicals and in most cases this involves no change in shape.

These items could not be considered direct cognates since the S.10 items are frequently quite valid direct reflexes, whereas the S.21 items are of necessity skewed.[1]

S.41 and S.42 vary in their relationship each to S.21. The following final chapter considers in greater detail these conclusions and collates all summaries and conclusions from the previous chapters.

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1. They cannot be described as having the same shape since the p, t, and k are ejective in S.21 and are not ejective in the S.10 languages.

Chapter 7

Conclusions

7.0

This study has been undertaken against a background of Common Bantu as developed in Comparative Bantu and one of its main characteristics is the use of this background as a starting point and then the taking of the comparison of the selected languages beyond the level of the procedures in Comparative Bantu. This accounts for the way the affinities between these languages have been considered and in particular the treatment of the large amount of apparently extra common material in them that cannot be treated as direct cognates, i.e. items in one language corresponding perfectly in shape with items in another language. This aspect of the study thus goes beyond questions of their genealogical relationships.

In the previous chapters (especially 4 - 6), special ways of processing this non-direct cognate material had to be developed and the application of these procedures produced certain tentative conclusions presented at the

end of each chapter. At this point therefore some attempt must be made to take the procedures one stage further by collating these separate conclusions. In addition, the outcome of this collation of the various detailed results has to be viewed against the probable genealogical relationships obtained by the application of the comparative method used in CpB. This then leads to some more generalised conclusions from which an extra dimension is introduced into the statement of the affinities between Venda and the other six selected languages, which was the avowed intention of the whole study.

7.1

As an essential preliminary, it is therefore necessary to draw the picture obtained by the application of the comparative method to the direct cognate material.

In Chapter 2, the Indices of Relationship between five of the seven chosen languages were calculated. From these calculations it was possible to set up a hypothetical 'family tree'. The more significant features that were abstracted from the various Indices of Relationship and

which were taken into account in the actual structure of the 'tree', need to be pointed out again, since it is against these that the conclusions drawn from the non-direct cognate material have to be examined.

The highest Index of Relationship displayed by Venḓa with any of the other six languages is that between Venḓa and Southern Sotho. Moreover, although there is a very high Index of Relationship between the two languages in the Nguni group, (probably because in different circumstances they could be regarded as a pair of dialects), there is a significant difference in their relationship to Venḓa as measured by the Indices of Relationship. The remaining significant case is that, although the Shona languages (as represented by Manyika) are contiguous with Venḓa, they have a much smaller Index of Relationship to Venḓa than the Sotho group (as represented by Southern Sotho).

7.2.

From the material there has emerged a certain number of instances of a set of direct cognates between the chosen languages for which there seem to be no other

cognates outside Zone S. The value of these cognates for the genealogical tree is somewhat uncertain, but they are clearly significant in any discussion of the probable affinities between the chosen languages. On the basis of the semantic categories of these common cognates, it seems that there is nothing to suggest an earlier geographical position for the languages[1] any different from their present one. This relative position of the present day languages is also not incompatible with the shape of the hypothetical 'family tree'.

Some distinct semantic categories have emerged in these putative direct cognates between Venḓa and each of the other three groups, from which tentative hypotheses have been made. In general, the evidence in respect to terms of domesticity seems to suggest that there may be some link between Venḓa and the Shona group on the female side. The link with the Sotho groups on the other hand, appears to be on the male side since a number of the terms refer to hunting and cattle-keeping. One cannot interpret this kind of fact with any certainty, but one way to account for it would be to suppose that at some

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1. Ref. CpB 61.02 for the validity of considering a language to have a geographical position.

period or other, the Venḓa acquired Shona-speaking wives and on the other hand, that some Venḓa-speaking wives were acquired by the Sotho. A further point that is probably relevant is that hunting terms are held by some historians[2] to be of more significance in indicating an early phase in the relationship between neighbouring peoples. The link between Venḓa and the Nguni group is consistent historically with the military and political prowess displayed by the Nguni.

7.3

There now remains the question of synthesising the tentative conclusions from the study of the indirect cognates with the picture developed so far. Although the two types of presumed intrusive material had to be dealt with separately in Chapters 4 and 5 for convenience of treatment, in the event, the two sets of specific conclusions can be handled together now. The main difference has turned out to be one of degree rather than of kind, so there need not be a distinction here between the two.

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2. Personal communication from Dr. Richard Gray.

From the evidence of the intrusive material, it has been found that certain parts of the lexical equipment of Venḓa can be classified according to the way they correspond to certain sections of one of the other chosen languages. This has been based largely on whether the apparent cognates involved happen to be direct in the one language, but indirect in the other. Another factor to be taken into account is that certain parts of the apparently intrusive material may have arisen through the operation of regular processes within the language itself. For example in Venḓa items in Class 5, or sounds occurring as a result of the Sequence Rule (as expounded in Chapter 4) may be considered to belong intrinsically to the lexical equipment of Venḓa. However, there appears to be a correlation between a large proportion of these features and the parallel non-ejective sounds in the Shona languages. For instance the Sequence Rule operated with nominals only and hence p', t', and k occurring in Venḓa radicals must be considered as extraneous and possibly intrusive. On closer examination it has been found that there is a particularly high correspondence of these sounds with the p, t, and k in the Shona languages

under discussion. A consideration of the semantic categories into which items containing these sounds fall, has revealed that a high proportion of these Venḓa radicals express meanings that fit in with the terms relating to domesticity discussed in 7.2 above.

The operation of a double sound change in the Class 5 prefix is a further example of a feature indicating some kind of affinity that is limited to Venḓa and the Shona languages, as this phenomenon occurs only spasmodically and irregularly in the Sotho languages.

On the other hand, the presence of a homorganic nasal in the initial consonant of radicals, (a nasal augment), which is elaborated in Chapter 4 is a common feature only in Venḓa and the Sotho languages. However, this feature can be considered to be not entirely extraneous as the presence of a nasal in the first consonant is a regular occurrence in nominals. The aspirated consonants resulting from the presence of the nasal augment in radicals which looked like skewed reflexes of Common Bantu, seem on the other hand to have a special relationship with the Nguni group, where such consonants are a regular reflex of a

starred consonant. From an examination of the semantic categories of these correlations, there has emerged a certain number that refer to emotional activities and a few to political activity. The latter substantiates a hypothesis put forward in 3.2.3c above.

The wholly foreign material in Venḓa of Dutch/Afrikaans origin considered in the addendum to Chapter 4 did display regular correspondences between the intrusive material and Venḓa. Since there is documentary evidence to show that the Venḓa had contact with the Dutch traders on the coast some 150 years[3] before contact with the Afrikaners, it is at least feasible that items displaying the regular sound-shifts noted may be attributable to this earlier contact. Also this might explain why Venḓa alone of the seven languages seems to display regularity of correspondence to such an extent. If the intrusive material from Dutch/Afrikaans does not go back to the same era, it seems unlikely to shed any light on the affinity of Venḓa with the other languages.

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3. See Bibl. no. 42

7.4

The procedures used in Chapter 6, calculating statistically the proportions of direct as opposed to indirect cognates while not fitting in with accepted methods, nevertheless did throw some additional light on certain aspects of the affinities being investigated. As a result of these calculations made in that chapter, it emerged that the figures for the Sotho group on the basis of direct as opposed to indirect cognates, are most similar to those of Venḓa, while the greatest divergence is between Venḓa and the Nguni group. The relationships between Venḓa and the Shona group in respect to direct and indirect cognates appears to be of a different nature. In this case the apparently common material found in these two groups has a high proportion of indirect cognates, particularly in the case of the radicals. This is in contrast with the hypothesis about the relative likelihood of nominal stems and verbal radicals occuring in intrusive material that is propounded in the preamble to 6.2 above.

The conclusion that Venḓa and the Sotho group display affinities with respect to the proportion of the direct and indirect cognate material seems to agree fairly closely with the purely genealogical relationship displayed in the 'family tree' which is based on calculations of the direct reflexes of Common Bantu.

7.5

The choice of these particular southern Bantu languages[4] may be claimed to be a good one since it has resulted in

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4. It seemed desirable to make the experiment of including a third S.30 language (Pedi S.32a) at a certain stage in the procedure, because superficially it appeared that there might be a strong link between this language and Venḓa. This was in fact based on the impressions supplied by informant M.E.R. Mathivha. However, after a brief survey of this language, it was found that it did not add materially to the evidence provided by the two S.30 languages already chosen. Nevertheless, one may hope that further insight into details of the affinities between the Zone S languages might be gained by further studies of other languages in these groups such as Karanga S.14, Ndebele S.44, Tsonga S.53 and Swati S.43.

the provision of sufficient evidence of both the similarities and dissimilarites between the languages and hence broadly between the groups, S.10, S.20, S.30 and S.40. From this evidence some reasonable conclusions have been reached about the probable affinities between Venḓa and the other six languages in this study.

The choice of Venḓa as the language of reference has in fact justified the expectations on the basis of which it was selected. In the study as a whole it has been demonstrated that Venḓa, while showing notable affinities with the Sotho group in many respects and with the Shona group in others, should continue to be classified as a group on its own within Zone S.[5] The conclusion that Venḓa probably has a very close relationship with the Sotho group had not been noted previously;[6] this somewhat unexpected result is an added reason why the choice of Venḓa as the main point of comparison may be regarded as fruitful.

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5. Compare the similar classification of languages like Yei R.41, the only language in group R.40. See Guthrie: Bibl. no. 18e.
6. They are separated by a contour in five out of six of the topograms on pages 102, 103 in CpB. and in nine out of sixteen on pages 106 - 109, and are not directly linked in the genealogy on page 27 vol. 2 CpB., all of which seems to show that the relationship between them within CB is not very close.

7.6.

The final conclusions that have emerged from this study may be listed as follows:

1) It is possible to assort the items of the Venda lexicon by taking into account the lexicons of languages in neighbouring groups

2) The use of Venda as the central point of reference has demonstrated the not inconsiderable homogeneity of the languages of Zone S. Nonetheless, the relative homogeneity of these languages as compared with the state of affairs elsewhere in the Bantu field cannot be determined until similar studies are made in other zones.

3) This study has relevance for comparative work in other parts of the Bantu field in that, as far as is known, it is the first attempt to deal with indirect cognates separately from direct cognates and in addition to attempt a synthesis of the two types of data.

This composite picture would seem to justify the claim that this study has made some contribution to our knowledge

of the various inter-relationships of the seven languages selected. It is not possible to estimate the validity of the several hypotheses put forward in the field of prehistory, although many of the conclusions drawn would appear to be of the same order as a number of the inferences in Bantu prehistory to be found in Comparative Bantu.

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APPENDIX

Unified Transcription of Vowels and Consonants (in all positions)

The table below shows in the first column the vowels and consonants used in the thesis. The next seven columns show the corresponding vowels or consonants occurring in the seven languages. Where the vowel or consonant has a reflex in CB the starred form is given. Where the corresponding vowel or consonant is extraneous in a language a cross is indicated in the column under the corresponding language. The nasalised varieties of the consonantsare shown only where they occur as reflexes of a different starred consonant. A blank in a column indicates that the vowel or consonant in the first column does not occur in the particular language in that column.

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
a	*a	*a	*a	*a	*a	*a	*a
b	*yịp$_2$	X	X	*b	*b	X	X
β	*b						
6		*yịb$_2$	*yịb$_2$			*b	*b
bv	*dụ/ *dụ(a)	*bụ/ *dụ/ *gụ	*bụ/ *dụ/ *gụ				
bɣ	in pl.	*bu(a)	*bu(a)				
bx					*bu(a)		
ɛ						*bi(a)/ *bua	
ɛh						X	
d	X/d.5	X	X	*dị/ *dị/X		X	X
ɗ	*	*yịd$_2$/ *yịt$_2$	*yịd$_2$/ *yịt$_2$				

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
ɟ	*j/cl.5						
ɲɟ	*nj						
dʒ	*bi̯(a)/ *di̯						
ndʒ	*di̯(a)						
ʤ	*yi̯ŋgin	X	X	*bi(a)/ *di(a)	*bi(a)/ *di(a)	X	X
nd	(reflexive)					*mbu(a)	*mbu(a)
dz	*yi̯d_2	*di̯	*di̯				
ʤg			*dia				
e	*e	*e	*e	(e)	(e)	(e)	(e)
ẹ				*ẹ	*ẹ		
ɛ	(ɛ)			*e	*e	*e	*e
f	*pu̯/ *tu̯/ *ku̯/ *ku(a) *yi̯k_2	*pu̯/ *tu̯	*pu̯/ *tu̯	*p/*ku̯	*ku̯	*pu̯/ *pi̯/ *tu̯/ *ku̯/ *tu̯(a)	*pu̯/ *pi̯/ *tu̯/ *ku̯/ *tu̯(a)

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
g	cl.6/X	*yɨk$_2$/X	*yɨk$_2$/X			X	X
ɣ						X	
h					*p/*ku		
ɦ	*k	*ŋk	*nk			X	X
h				*k			
ɕ				*c/*nc		*c/*yɨk$_2$	*c/*yɨk$_2$
ʒ						X	*di(a)
ʒy		*dia					
i	*i/*ɨ	*i/*ɨ	*i/*ɨ	*i	*i	*i/*ɨ	*i/*ɨ
ɨ				*ɨ	*ɨ		
j						X	
k		*k	*k				
k'	X			*ng		*k$_2$/X	*k$_2$/X

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
kh	*nk	X				*k	*k
kl'							X
kxh				*nk/*yɨk$_2$	*nk/yɨk$_2$		
kx'						X	
l				*d		*d	*d
ɭ[ɾ]	*d				*d		
ɨ	*di(a)						
m	*m	*m	*m	*m	*m	*m	*m
mŋ	*mu(a)	*mu(a)	*mu(a)				
mɦ		*mp	*mp				
n	*n	*n	*n	*ni(a)/ *ny	*n	*n	*n
nɦ		*nt	*nt				

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
ŋ	*n/*ny *in(a)						
ny[ɲ]	*ni	*ni	*ni	*ni	*ni	*ni/*ny	*ni
ŋ				*mi{a}/ *mu{a}			
o	*o	*o	*o	X	X	(*o)	(*o)
o				*u	*u		
ɔ				*o	*o	*o	*o
p		*p	*p				
p'	X			*mb_2	*mb_2	X	X
ph	*mp			*mp	*mp	*p	*p
φ[f]	*p						
pf	*ty(a)	*mpy/ *nty/ *ky	*mpy/ *nty/ *ky				

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
pfh	*mpu̯/ *ntu̯ *nku̯						
ps̯		*pi(a)/ *mpi̯	*pi(a)/ *mpi̯				
px		*pu(a)	*pu(a)				
pʃ				*mbu(a)			
pʃh				*pu(a)			
r	*t	*d	*d	*t	*t	X	X
s	*ce~i ~i̯~u̯	*ki̯/*c/ *nc *yi̯c$_2$	*ki̯/*c/ *nc *yi̯c$_2$	*ki/*ki(a) *ki̯/*ki̯(a)	*ki/ *ki(a) *ki̯/ *ki̯(a)	*ti̯/ki i̯ *ci~i̯~u̯	*ti̯/*yi̯k$_2$
s̯	*pi̯/ *pi(a)	*pi̯	*pi̯				
ʃ	*yi̯t$_2$			*yi̯k$_2$ *ku(a)	*pu(a) *ku(a)		*pu(a) *pi̯(a)
t		*t	/t				

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
t'		X		*nd	*nd	X	X
th	*nt			*nt	*nt	*t	*t
ţ	*c						
ţh	*nc						
tl[tɬ]				*j/*nj/ *yi̯j$_2$	*j/*nj		
tlh				*nc	*j/*nj/ *yi̯j$_2$		
ts'		*ti̯/ *nti̯/ *nki̯	*ti̯/ *nti̯/ *nki̯	*biu̯/ *dia *yi̯b/ *du̯(a) *bi̯(a)/ *bu̯(a)			
ts^			*pi(a)/ *mpi̯				

	S.21	S13	S.12	S.33	S.31	S.41	S.42
tsh				*yi̯t$_2$ *nci~i̯~u̯	*nci~i̯~u̯		
tswh				*yi̯p$_2$/ *tu̯(a) *pi̯(a)/ *pu̯(a)	*yi̯p$_2$/ *tu(a)		
tsh^	*ki̯/ *ki̯(a) *nci/ *nci̯						
tʃ'		*ki	*ki		*bi̯(a)/ *bu̯(a)		*bi(a)
tʃk			*ti~e				
tswh	*mpi̯						
tʃh	*ki/ *ki(a)			*pi(a)	*pi(a) *pu̯(a)	*pi(a)/ *pu(a) *di(a)	
u	*u̯/*u̯	*u/*u̯	*u/*u̯	*u̯	*u̯	*u/*u̯	*u/*u̯

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
ɣ				*ɣ	*ɣ		
v	*bɣ/ *bɣ(a) *yɨb$_2$	*bɣ/ *bɣ(a)	*bɣ/ *bɣ(a)			*bɨ/ *bɣ/ *bɣ(a) *dɣ/ *dɣ(a) *gɣ	*bɨ/ *bɣ *bɣa/ *dɣ *dɣ(a) *gɣ
ʋ			*b				
w		*b					
ƀw		cl .14	cl.14				
x	*pu(a)				*k(a)	X	
y	*gi/ *ji(a)			*yɨ/ *yi	*yi/ *yɨ	*gi(a)	*gi(a)
z		*gɨ/ *j/ *nj/ *yɨj$_2$	*gɨ/ *j/ *nj *yɨj$_2$			*bɨ(a)/ *dɨ/ *dɨ(a) *gɨ/ *j	*bi(a) *dɨ/ *dɨ(a) *gɨ/ *j

	S.21	S.13	S.12	S.33	S.31	S.41	S.42
n	X						
z	*bi/ *bi(a)	*bi	*bi				
ɬ						X	X
!				X		X	X
ɮ						X	X